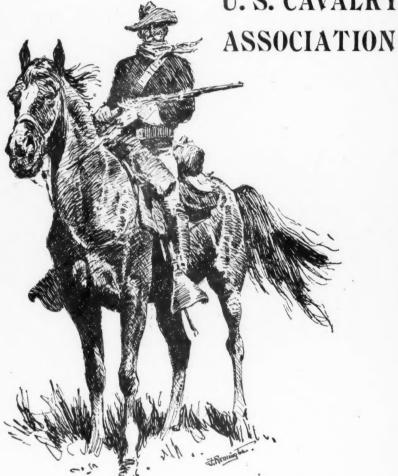
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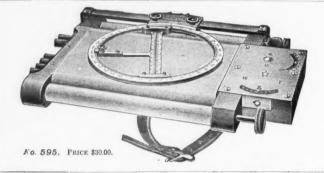
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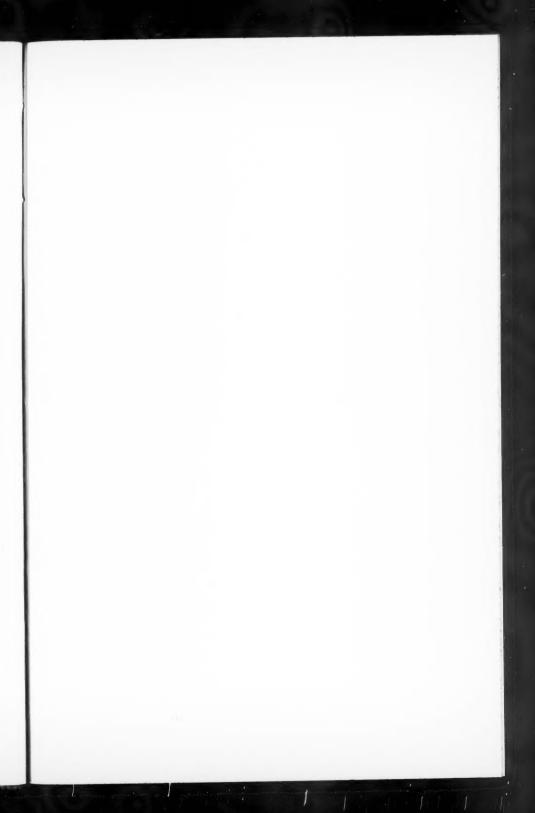
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The next Regular Annual Meeting of the U. S. Cavalry Association will be held in Grant Hall, at Fort Leavenworth, Kansas, at 8:00 p. m. on Monday, January 17, 1910, as provided in Section 1, Article VI, of the Constitution of the Association.

A list of the members of the Association who are on duty at Fort Leavenworth will be found on the back hereof.

Please fill out, sign and return the proxy hereon below and mail the same to the Secretary without delay. Cavalry officers on duty with their regiments can save trouble by handing the same to the regimental member of the Sub-Council.

Very respectfully,

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JOURNAL

OF THE

United States Cavalry Association.

Vol. XX.

NOVEMBER, 1909.

No. 75.

BATTLE OF GETTYSBURG.

(Continued.)

At four o'clock on the morning of the 3d I was awakened by General Gibbons pulling me by the foot, and saying, "Come, don't you hear that?" I sprang to my feet. Where was I? A moment and my dead senses and memory were alive again, and the sound of brisk firing of musketry to the front and right of the Second Corps, and over at the extreme right of our line, where we heard it last in the night, brought all back to my memory. We surely were on the field of battle; and there were palpable evidences to my senses that today was to be another of blood. Oh, for a moment the thought of it was sickening to every sense and feeling! But the motion of my horse as I galloped over the crest a few minutes later, and the serene splendors of the morning now breaking through the rifted clouds and spreading over all the landscape, soon reassured me.

I found a sharp skirmish going on in front of the right of the Second Corps, between our outposts and those of the enemy; but save this—and none of the enemy but his outposts were in sight—all was quiet in all that part of the field. On the extreme right of the line the sound of musketry was quite heavy; and this, I learned, was brought on by the attack of the Second

Division of the Twelfth Corps-General Geary-upon the enemy in order to drive him out of our works, which he had sneaked into vesterday, as I have mentioned. The attack was made at the earliest moment of the morning where it was light enough to discern objects to fire at. The enemy could not use the works, but were confronting Geary in woods, and had the cover of many rocks and trees; so the fight was an irregular one, now breaking out and swelling to a vigorous fight, now subsiding to a few scattering shots; and so it continued by turns until the morning was well advanced, when the enemy was finally wholly repulsed and driven from the pits, and the right of our line was again re-established in the place it first occupied. The heaviest losses the Twelfth Corps sustained in all the battle occurred during this attack; and they were here quite severe. I heard General Meade express dissatisfaction at General Geary for making this attack, as a thing not ordered and not necessary, as the works of ours were of no intrinsic importance, and had not been captured from us by a fight, and Geary's position was just as good where he was during the night. And I heard General Meade say that he sent an order to have the fight stopped; but I believe the order was not communicated to Geary until after the repulse of the enemy. Later in the forenoon the enemy again tried to carry our right by storm. We heard that Ewell had sworn an oath that he would break our right. He had Stonewall Jackson's corps, and possibly imagined himself another Stonewall; but he certainly hankered after the right of our line, and so up through the woods, and over the rocks, and up the steeps, he sent his storming parties. Our men could see them now in the daytime. But all their efforts were fruitless, save in one thing-slaughter to his own men. These assaults were made with spirit and determination, but as the enemy would come up, our men, lying behind their secure defenses, would just singe them with a blaze of their muskets, and riddle them, as a bailstorm the tender blades of corn. Their loss was very heavy indeed, here; ours but trifling. I regret that I cannot give more of the details of this fighting upon the right; it was so determined upon the part of the enemy, both last night and this morning—so successful to us. About all that I actually saw of it during its progress was the smoke, and I heard the discharges. My information is derived from the officers who were personally in it. Some of our heavier artillery assisted our infantry in this byfiring, with the pieces elevated, far from the rear, over the heads of our men, at a distance from the enemy of two miles, I suppose. Of course they could have done no great damage. It was nearly eleven o'clock that the battle in this part of the field subsided, not to be again renewed. All the morning we felt no apprehension for this part of the line; for we knew its strength, and that our troops engaged, the Twelfth Corps and the First Division, Wadsworth's, of the First, could be trusted.

For the sake of telling one thing at a time, I have anticipated events somewhat, in writing of this fight upon the right. I shall now go back to the starting point—four o'clock this morning, and, as other events occurred during the day second to none in the battle in importance, which I think I saw as much of as any man living, I will tell you something of them, and what I saw, and how the time moved on. The outpost skirmish that I have mentioned soon subsided. I suppose it was the natural escape of the wrath which the men had during the night hoarded up against each other, and which, as soon as they could see in the morning, they could no longer contain, but must let it off through their musket barrels at their adversaries. At the commencement of the war such firing would have awaked the whole army, and roused it to its feet and to arms; not so now. The men upon the crest lay snoring in their blankets, even though some of the enemy's bullets dropped among them, as if bullets were harmless as the drops of dew around them. As the sun arose today the clouds became broken, and we had once more glimpses of sky and fits of sunshine-a rarity-to cheer us. From the crest, save to the right of the Second Corps, no enemy, not even his outposts, could be discovered along all the position where he so thronged upon the Third Corps yesterday. All was silent there. The wounded horses were limping about the fields; the ravages of the conflict were still perfectly visible—the scattered arms and the ground thickly dotted with the dead-but no hostile foe.

The men were roused early, in order that their morning meal might be out of the way in time for whatever should occur. Then ensued the hum of an army, not in ranks, chatting in low tones, and running about and jostling among each other, rolling and packing their blankets and tents. They looked like an army of rag-gatherers while shaking these very useful articles of the soldier's outfit, for you must know that rain and mud in conjunction have not had the effect to make them very clean, and the wear and tear of service have not left them entirely whole. But one could not have told by the appearances of the men that they were in battle vesterday and were likely to be again today. They packed their knapsacks, boiled their coffee, and munched their hard bread, just as usual—just like old soldiers, who know what campaigning is; and their talk is far more concerning their present employment—some joke or drollery—than concerning what they saw or did yesterday.

As early as practicable the lines all along the left are revised and re-formed, this having been rendered necessary by yesterday's battle, and also by what is anticipated today. It is the opinion of many of our generals that the enemy will not give us battle today, that he had enough yesterday; that he will be heading towards the Potomac at the earliest practicable moment, if he has not already done so. But the better and controlling judgment is that he will make another grand effort to pierce or turn our lines; that he will either mass and attack the left again, as yesterday, or direct his operations against the left of our center, the position of the Second Corps, and try to sever our line. I infer that General Meade was of the opinion that the attack today would be upon the left—this from the disposition he had ordered. I know that General Hancock anticipated the attack upon the center.

The dispositions today upon the left are as follows: The Second and Third Divisions of the Second Corps are in the positions of yesterday; then on the left came Doubleday's—the Third Division and Colonel Stannard's Brigade of the First Corps; then Caldwell's—the First Division of the Second Corps; then the Third Corps, temporarily under the command of Hancock.

since Sickles' wound. The Third Corps is upon the same ground in part, and on the identical line where it first formed yesterday morning, and where, had it stayed instead of moving out to the front, we should have many more men today, and should not have been upon the brink of destruction vesterday. On the left of the Third is the Fifth Corps, with a short front and deep line; then comes the Sixth Corps, all but one brigade, which is sent over to the Twelfth. The Sixth, a splendid Corps, almost intact in the fight of vesterday, is the extreme left of our line, which terminates to the south of Round Top, and runs along its western base, in the woods, and thence to the Cemetery. This corps is burning to pay off scores made on the fourth of May, then back of Fredericksburg. Note well the position of the Second and Third Divisions of the Second Corps—it will become important. There are nearly six thousand men and officers in these two divisions here upon the field. The losses were quite heavy yesterday-some regiments are detached to other parts of the field—so all told there are less than six thousand men now in the two divisions, who occupy a line of about a thousand vards. The most of the way along this line upon the crest was a stone fence, constructed from small rough stones, a good deal of the way badly fallen down; but the men had improved it and patched it with rails from the neighboring fences, and with earth, so as to render it in many places a very passable breastwork against musketry and flying fragments of shells. These works are so low as to compel the men to kneel or lie down generally to obtain cover. Near the right of the Second Division, and just by the little group of trees that I have mentioned there, this stone fence made a right angle, and extended thence to the front, about twenty or thirty yards, where with another less than a right angle it followed along the crest again. The lines were conformed to these breastworks and to the nature of the ground upon the crest, so as to occupy the most favorable places—to be covered, and still be able to deliver effective fire upon the enemy should he come there. In some places a second line was so posted as to be able to deliver its fire over the heads of the first line behind the works; but such formation was not practicable

all of the way. But all the force of these two divisions was in line, in position, without reserves, and in such manner that every man of them could have fired his piece at the same instant. The division flags-that of the Second Division being a white trefoil upon a square blue field, and of the Third Division a blue trefoil upon a white rectangular field-waved behind the divisions at the points where the generals of divisions were supposed to be; the brigade flags, similar to these, but with a triangular field, were behind the brigades; and the national flags of the regiments were in the lines of the regiments. To the left of the Second Division, and advanced something over a hundred vards. were posted a part of Stannard's brigade, two regiments or more, behind a small bush-crowned crest that ran in a direction oblique to the general line. These were well covered by the crest, and wholly concealed by the bushes, so that an advancing enemy would be close upon them before they could be seen. Other troops of Doubleday's division were strongly posted in rear of these in the general line.

I could not help wishing all the morning that this line of the divisions of the Second Corps were stronger; it was, so far as numbers constitute strength, the weakest part of our whole line of battle. What if, I thought, the enemy should make an assault here today, with two or three heavy lines—a great overwhelming mass-would he not sweep through that thin six thousand? But I was not General Meade, who alone had power to send other troops there; and he was satisfied with that part of the line as it was. He was early on horseback this morning, and rode along the whole line, looking to it himself, and with glass in hand sweeping the woods and fields in the direction of the enemy, to see if aught of him could be discovered. His manner was calm and serious, but earnest. There was no arrogance of hope, or timidity of fear, discernible in his face; but you would have supposed he would do his duty conscientiously and well, and would be willing to abide by the result. You would have seen this in his face. He was well pleased with the left of the line today, it was so strong with good troops. He had no apprehension for the right, where the fight was now going on,

on account of the admirable position of our forces there. He was not of the opinion that the enemy would attack the center, our artillery had such sweep there, and this was not a favorite point of attack with the enemy; besides, should he attack the center, the general thought he could reinforce it in good season. I heard General Meade speak of these matters to Hancock and some others, at about nine o'clock in the morning, while they were up by the line, near the Second Corps.

No further changes of importance, except those mentioned, were made in the disposition of the troops this morning, except to replace some of the batteries that were disabled yesterday, by others from the artillery reserve, and to brace up the lines well with guns, wherever there were eligible places, from the same source. The line is all in good order again, and we are ready for general battle.

Save the operations upon the right, the enemy, so far as we could see, was very quiet all the morning. Occasionally the outposts would fire a little, and then cease. Movements would be discovered which would indicate the attempt on the part of the enemy to post a battery; our Parrotts would send a few shells to the spot, then silence would follow. At one of these times a painful accident happened to us, this morning. First Lieutenant Henry Ropes, Twentieth Massachusetts, in General Gibbon's division, a most estimable gentleman and officer, intelligent, educated, refined, one of the noble souls that came to the counutry's defense, while lying at his post with his regiment, in front of one of the batteries, which fired over the infantry, was instantly killed by a badly made shell, which, or some portion of it, fell but a few yards in front of the muzzle of the gun. The same accident killed or wounded several others. The loss of Ropes would have pained us at any time, and in any manner; in this manner his death was doubly painful.

Between ten and eleven o'clock, over in a peach orchard in front of the position of Sickles yesterday, some little show of the enemy's infantry was discovered. A few shells scattered them; they again appeared, and, it becoming apparent that they were only posting a skirmish line, no further molestation was offered them. A little after this some of the enemy's flags could be discerned over near the same quarter, above the top, and behind a small crest of a ridge. There seemed to be two or three of them—possibly they were guidons—and they moved too fast to be carried on foot. Possibly, we thought, the enemy is posting some batteries there. We knew in about two hours from this time better about the matter. Eleven o'clock came. The noise of battle has ceased upon the right; not a sound of a gun or musket can be heard on all the field. The sky is bright with only the white fleecy clouds floating over from the west; the July sun streams down its fire upon the bright iron of the muskets in stacks upon the crest, and the dazzling brass of the Napoleons. The army lolls and longs for the shade, of which some get a hand's breadth from a shelter tent stuck upon a ramrod. The silence and sultriness of a July noon are supreme.

Now it so happened that just about this time of day a very original and interesting thought occurred to General Gibbon and several of his staff: that it would be a very good thing, and a very good time, to have something to eat. When I announce to you that I had not tasted a mouthful of food since vesterday noon, and that all I had had to drink since that time, but the most miserable, muddy, warm water, was a little drink of whiskey that Major Biddle, General Meade's aid-de-camp, gave me last evening, and a cup of strong coffee that I gulped down as I was first mounting this morning, and, further, that, save the four or five hours in the night, there was scarcely a moment since that time but that I was in the saddle, you may have some notion of the reason of my assent to this extraordinary proposition. Nor will I mention the doubts I had as to the feasibility of the execution of this very novel proposal, except to say that I knew this morning that our larder was low; not to put too fine a point upon it, that we had nothing but some potatoes and sugar and coffee in the world. And I may as well say here, that of such, in scant proportions, would have been our repast, had it not been for the riding of miles by two persons, one an officer, to procure supplies; and they only succeeded in getting some few chickens, some butter, and one huge loaf of bread, which last was bought

of a soldier, because he had grown faint in carrying it, and was afterwards rescued with much difficulty, after a long race, from a four-footed hog which had got hold of and had actually eaten a part of it. "There is a divinity," etc. Suffice it, this very ingenious and unheard of contemplated proceeding, first announced by the general, was accepted, and at once undertaken by his staff. Of the absolute quality of what we had to eat, I could not pretend to judge, but I think an unprejudiced person would have said of the bread, that it was good; so of the potatoes, before they were boiled. Of the chickens, he would have questioned their age, but these were large and in good running order. The toast was good, and the butter—there were those who, when coffee was given them, called for tea, and vice versa, and were so ungracious as to suggest that the water that was used in both might have come from near a barn. Of course it did not. We all came down to the little peach orchard where we had stayed last night, and, wonderful to see and tell, ever mindful of our needs, had it all ready, had our faithful John. There was an enormous pan of stewed chickens, and the potatoes and toast, all hot, and the bread and butter, and tea and coffee. There was satisfaction derived from just naming them all over. We called John an angel, and he snickered and said he "knowed" we'd come. General Hancock is of course invited to partake. and without delay we commenced operations. Stools are not very numerous-two in all-and these the two generals have by common consent. Our table was the top of the mess chest. By this the generals sat; the rest of us sat upon the ground. cross-legged like the picture of a smoking Turk, and held our plates upon our laps. How delicious was the stewed chicken! I had a cucumber pickle in my saddle-bags, the last of a lunch left there two or three days ago, which George brought, and I had half of it. We were just well at it, when General Meade rode down to us from the line, accompanied by his staff, and by General Gibbon's invitation they dismounted and joined us. For the general commanding the Army of the Potomac, George, by an effort worthy of the person and the occasion, finds an empty cracker-box for a seat. The Staff officer must sit upon

the ground with the rest of us. Soon Generals Newton and Pleasanton, each with an aide, arrive. By an almost superhuman effort a roll of blankets is found, which, upon a pinch, is long enough to seat these generals both, and room is made for them. The aides sit with us. And, fortunate to relate, there was enough cooked for us all, and from General Meade to the voungest second lieutenant we all had a most hearty and wellrelished dinner. Of the "past" we were "secure." The generals ate, and, after, lighted cigars, and under the flickering shade of a very small tree discoursed of the incidents of vesterday's battle, and of the probabilities of today. General Newton humorously spoke of General Gibbon as "this young North Carolinian," and how he was becoming arrogant and above his position because he had commanded a corps. General Gibbon retorted by saving that General Newton had not been long enough in such a command, only since vesterday, to enable him to judge of such things.

General Meade still thought that the enemy would attack his left again today, towards evening; but he was ready for them. General Hancock, that the attack would be upon the position of the Second Corps. It was mentioned that General Hancock would again resume command of the Second Corps from that time, so that General Gibbon would again return to the Second Division. General Meade spoke of the Provost Guards —that they were good men, and that it would be better today to have them in the ranks than to stop stragglers and skulkers, as these latter would be good for but little even in the ranks; and so he gave the order that all the Provost Guards should at once temporarily rejoin their regiments. Then General Gibbon called up Captain Farrel, First Minnesota, who commanded the Provost Guard of his division, and directed him for that day to join the regiment. "Very well, sir," said the captain, as he touched his hat and turned away. He was a quiet, excellent gentleman, and thorough soldier. I knew him well, and esteemed him. I never saw him again. He was killed in two or three hours from that time, and over half of his splendid company were either killed or wounded.

And so the time passed on, each general now and then dispatching some order or message by an officer or orderly, until about half past twelve, when all the generals, one by one, first General Meade, rode off their several ways; and General Gibbon and his staff alone remained. We dozed in the heat, and lolled upon the ground, with half open eyes. Our horses were hitched to the trees, munching some oats. A great lull rests upon all the field. Time was heavy, and for want of something better to do, I yawned and looked at my watch; it was five minutes before one o'clock. I return my watch to its pocket, and thought possibly that I might go to sleep, and stretched myself upon the ground accordingly. My attitude and purpose were those of the general and the rest of the staff.

What sound was that? There was no mistaking it! The distinct, sharp sound of one of the enemy's guns, square over to the front, caused us to open our eyes and turn them in that direction, when we saw directly above the crest the smoke of the bursting shell, and heard its noise. In an instant, before a word was spoken, as if that was the signal gun for general work, loud, startling, booming, the report of gun after gun, in rapid succession, smote our ears, and their shells plunged down and exploded all around us. We sprang to our feet. In briefest time the whole line of the enemy to the west was pouring out its thunder and its iron upon our devoted crest. The wildest confusion for a few moments obtained among us. The shells came bursting all about. The servants ran terror-stricken for dear life, and disappeared. horses hitched to the trees, or held by the slack hands of orderlies. neighed out in fright, and broke away and plunged riderless through the fields. The general at the first had snatched his sword, and started on foot to the front. I called for my horse: nobody responded. I found him tied to a tree nearby, eating oats, with an air of the greatest composure, which, under the circumstances, even then struck me as exceedingly ridiculous. He alone, of all beasts or men near, was cool. I am not sure but that I learned a lesson then from a horse. Anxious alone for his oats, while I put on the bridle and adjusted the halter, he

delayed me by keeping his head down, so I had time to see one of the horses of our mess wagon struck and torn by a shell. The pair plunge—the driver has lost the rein; horses, driver, and wagon go into a heap by a tree. Two mules close at hand, packed with boxes of ammunition, are knocked all to pieces by a shell.

General Gibbon's groom has just mounted his horse, and is starting to take the general's to him, when the flying iron meets him and tears open his breast; he drops dead, and the horses gallop away. No more than a minute since the first shot was fired, and I am mounted and riding after the general. The mighty din that now rises to heaven and shakes the earth is not all of it the voice of the rebellion; for our guns, the guardian lions of the crest, quick to awake when danger comes, have opened their fiery jaws and begun to roar—the great hoarse roar of battle. I overtook the general half way up to the line. Before we reach the crest his horse is brought by an orderly. Leaving our horses just behind a sharp declivity of the ridge, on foot we go up among the batteries. How the long streams of fire spout from the guns! how the rifled shells hiss! how the smoke deepens and rolls! But where is the infantry? Has it vanished in smoke? Is this a nightmare or a juggler's devilish trick? All too real. The men of the infantry have seized their arms, and behind their works, behind every rock, in every ditch, wherever there is any shelter, they hug the ground, silent, quiet, unterrified, little harmed. The enemy's guns, now in action, are in position at their front of the woods, along the second ridge that I have before mentioned, and towards their right, behind a small crest in the open field, where we saw the flags this morning. Their line is some two miles long, concave on the side toward us, and their range is from one thousand to eighteen hundred yards. A hundred and twenty-five guns of the enemy, we estimate, are now active, firing twenty-four pound, twenty, twelve, and ten-pound projectiles, solid shot and shells, spherical, conical, spiral. The enemy's fire is chiefly concentrated upon the position of the Second Corps. From the Cemetery to Round Top, with over a hundred guns, and to all parts of the enemy's

line, our batteries reply, of twenty and ten-pound Parrotts, tenpound rified ordnance, and twelve-pound Napoleons, using projectiles as various in shape and name as those of the enemy. Captain Hazard, commanding the Artillery Brigade of the Second Corps, was vigilant among the batteries of his command, and they were all doing well. All was going on satisfactorily. We had nothing to do, therefore, but to be observers of the grand spectacle of battle. Captain Wessels, Judge Advocate of the Division, now joined us, and we sat down just behind the crest, close to the left of Cushing's battery, to bide our time, to see, to be ready to act when the time should come, which might be at any moment. Who can describe such a conflict as is raging around us? To say that it was like a summer storm, with the crash of thunder, the glare of lightning, the shrieking of the wind, and the clatter of hailstones, would be weak. The thunder and lightning of these two hundred and fifty guns, and their shells, when smoke darkens the sky, are incessant, all-pervading, in the air above our heads, on the ground at our feet, remote, near, deafening, ear-piercing, astounding; and these hailstones are massy iron, charged with exploding fire. And there is little of human interest in a storm; it is an absorbing element of this. You may see flame and smoke, and hurrying men, and human passion, at a great conflagration; but they are all earthly, and nothing more. Those guns are great infuriate demons, not of the earth, whose mouths blaze with snaky tongues of living fire, and whose murky breath, sulphur-laden, rolls around them and along the ground, the smoke of Hades. These grimy men, rushing, shouting, their souls in frenzy, plying the dusky globes and the igniting spark, are in their league, and but their willing ministers. We thought that at the second Bull Run, at the Antietam, and at Fredericksburg on the 11th of December, we had heard heavy cannonading; they were but holiday salutes compared with this. Besides the great ceaseless roar of the guns, which was but the background of the others, a millions various minor sounds engaged the ear. The projectiles shriek long and sharp. They hiss, they scream, they growl, they sputter-all sounds of life and rage; and each has its different

note, and all are discordant. Was ever such a chaos of sound before? We note the effect of the enemy's fire among the batteries and along the crest. We see the solid shot strike axle, or pole, or wheel, and the tough iron and heart of oak snap and fly like straws. The great oaks there by Woodruff's guns heave down their massy branches with a crash, as if the lightning had smote them. The shells swoop down among the battery horses, standing there apart; a half dozen horses start, they tremble, their legs stiffen, their vitals and blood smear the ground. And these shot and shells have no respect for men, either. We see the poor fellows hobbling back from the crest, or, unable to do so, pale and weak, lying on the ground, with the mangled stump of an arm or leg dripping their life-blood away, or with a cheek torn open or a shoulder smashed. And many, alas! hear not the roar as they stretch upon the ground with upturned faces and open eyes, though a shell should burst at their yery ears. We saw them but a moment since, there among the flame, with brawny arms and muscles of iron, wielding the rammer and pushing home the cannon's plethoric load.

Strange freaks these round shot play! We saw a man coming up from the rear with his full knapsack on, and some canteens of water held by the straps in his hands. He was walking slowly, and with apparent unconcern, though the iron hailed around him. A shot struck the knapsack, and it and its contents flew thirty yards in every direction; the knapsack disappeared like an egg thrown spitefully against the rock. The soldier stopped, and turned about in puzzled surprise, put up one hand to his back to assure himself that the knapsack was not there, and then walked slowly on again unharmed, with not even his coat torn. Near us was a man crouching behind a small disintegrated stone, which was about the size of a common water-bucket. He was bent up, with his face to the ground, in the attitude of a pagan worshipper before his idol. It looked so absurd to see him thus, that I went and said to him: "Do not lie there like a toad-why not go to your regiment and be a man?" He turned up his face with a stupid, terrified look upon me, and then without a word turned his nose again to the

ground. An orderly that was with me at the time told me a few moments later, that a shot struck the stone, smashing it in a thousand fragments, but did not touch the man, though his head was no six inches from the stone. All the projectiles that came near us were not so harmless. Not ten yards away from us a shell burst among some small bushes, where sat three or four orderlies, holding horses. Two of the men and one horse were killed. Only a few yards off a shell exploded over an open limber box in Cushing's battery, and almost at the same instant another shell over a neighboring box. In both the boxes the ammunition blew up with an explosion that shook the ground, throwing fire and splinters and shells far into the air and all around, and destroying several men. We watched the shells bursting in the air, as they came hissing in all directions. Their flash was a bright gleam of lightning radiating from a point, giving place in a thousandth part of a second to a small, white, puffy cloud, like a fleece of the lightest, whitest wool. These clouds were very numerous. We could not often see the shell before it burst, but sometimes, as we faced towards the enemy, and looked above our heads, the approach would be heralded by a prolonged hiss, which always seemed to me to be a line of something tangible, terminating in a black globe, distinct to the eye, as the sound had been to the ear. The shell would seem to stop, and hang suspended in the air an instant, and then vanish in fire and smoke and noise. We saw the missiles tear and plow the ground. All in rear of the crest for a thousand yards, as well as among the batteries, was the field of their blind fury. Ambulances passing down the Taneytown road with wounded men were struck. The hospitals near this road were riddled. The house which was General Meade's headquarters was shot through several times, and a good many horses of officers and orderlies were lying dead around it. Riderless horses, galloping madly through the fields, were brought up, or down rather, by these invisible horse-tamers, and they would not run any more. Mules with ammunition, pigs wallowing about, cows in the pastures, whatever was animate or inanimate, in all this broad range, were no exception to their blind havoc. The percussion shells would strike and thunder, and scatter the earth, and their whistling fragments, the Whitworth bolts, would pound and ricochet, and bowl far away sputtering, with the sound of a mass of hot iron plunged in water; and the great solid shot would smite the unresisting earth with a sounding "thud," as the strong boxer crashes his iron fist into the jaws of his unguarded adversary.

Such were some of the sights and sounds of this great iron battle of missiles. Our artillery men upon the crest budged not an inch, nor intermitted; but, though eaisson and limber were smashed, and guns dismantled, and men and horses killed, there, amidst smoke and sweat, they gave back without grudge or loss of time in the sending, in kind whatever the enemy sent.

An hour has droned its flight since first the roar began. There is no sign of weariness or abatement on either side. So long it seemed, that the din and crashing around began to appear the normal condition of nature there, and fighting man's element. The general proposed to go among the men, and over to the front of the batteries; so at about two o'clock he and I started. We went along the lines of the infantry as they lay there flat upon the earth a little to the front of the batteries. They were suffering little, and were quiet and cool. How glad we were that the enemy were no better gunners, and that they cut the shell fuses too long. To the question asked the men: "What do you think of this?" the replied would be: "Oh, this is bully"; "We are getting to like it"; "Oh, we don't mind this." And so they lay under the heaviest cannonade that ever shook the continent, and among them a thousand times more jokes than heads were cracked. We went down in front of the line some two hundred vards, and as the smoke had a tendency to settle upon a higher plane than where we were, we could see near the ground distinctly all over the field, as well back to the crest where were our own guns, as to the opposite ridge where were those of the enemy. No infantry was in sight save the skirmishers, and they stood silent and motionless-a row of gray posts through the field on one side, confronted by another of blue.

Under the grateful shade of some elm trees, where we could see much of the field, we made seats of the ground and sat down. Here all the more repulsive features of the fight were unseen by reason of the smoke. Man had arranged the scenes, and for a time had taken part in the great drama; but at last, as the plot thickened, conscious of his littleness, and inadequacy to the mighty part, he had stepped aside and given place to more powerful actors. So it seemed: for we could see no men about the batteries. On either crest we could see the great flaky streams of fire, and they seemed numberless, of the opposing guns, and their white banks of swift convolving smoke; but the sound of the discharges was drowned in the universal ocean of sound. Over all the valley, the smoke, a sulphur arch, stretched its lurid space; and through it always, shrieking on their unseen courses, thickly flew a myriad of iron deaths. With our grim horizon on all sides round, toothed thick with battery flame, under that dissonant canopy of warring shells, we sat, and saw, and heard in silence. What other expression had we that was not mean, for such an awful universe of battle?

A shell struck our breastwork of rails up in sight of us, and a moment afterwards we saw the men bearing some of their wounded companions away from the same spot; and directly two men from there came down toward where we were, and sought to get shelter in an excavation near by, where many dead horses, killed in vesterday's fight, had been thrown. General Gibbon said to these men, more in a tone of kindly expostulation than of command: "My men, do not leave your ranks to try to get shelter here. All these matters are in the hands of God, and nothing that you can do will make you safer in one place than another." The men went quietly back to the line at once. The general then said to me: "I am not a member of any church, but I have always had a strong religious feeling; and so, in all these battles, I have always believed that I was in the hands of God, and that I should be unharmed or not, according to His will. For this reason, I think it is, I am always ready to go where duty calls, no matter how great the danger."

Half past two o'clock, an hour and a half since the com-

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mencement, and still the cannonade did not in the least abate; but soon thereafter some signs of weariness and a little slacking of fire began to be apparent upon both sides. First we saw Brown's battery retire from the line, too feeble for further battle. Its position was a little to the front of the line. Its commander was wounded, and many of its men were so, or worse; some of its guns had been disabled, many of its horses killed; its ammunition was nearly expended. Other batteries in similar case had been withdrawn before, to be replaced by fresh ones, and some were withdrawn afterwards. Soon after the battery named had gone, the general started to return, passing towards the left of the division, and crossing the ground where the guns had stood. The stricken horses were numerous, and the dead and wounded men lay about, and as we passed these latter, their low, piteous call for water would invariably come to us, if they had yet any voice left. I found canteens of water near-no difficult matter where a battle has been-and held them to livid lips; and even in the faintness of death the eagerness to drink told of the terrible torture of thirst. But we must pass on. Our infantry was still unshaken, and in all the cannonade suffered very little. The batteries had been handled much more severely. I am unable to give any figures. A great number of horses have been killed-in some batteries more than half of all. Guns had been dismounted, a great many caissons, limbers and carriages had been destroyed, and usually from ten to twenty-five men to each battery had been struck, at least along our part of the crest. Altogether the fire of the enemy had injured us much, both in the modes that I have stated, and also by exhausting our ammunition and fouling our guns, so as to render our batteries unfit for further immediate use. The scenes that met our eyes on all hands among the batteries were fearful. All things must end, and the great cannonade was no exception to the general law of earth. In the number of guns active at one time, and in the duration and rapidity of their fire, this artillery engagement up to this time must stand alone and preeminent in this war. It has not been often, or many times, surpassed in the battles of the world. Two hundred and fifty

guns, at least, rapidly fired for two mortal hours! Cipher out the number of tons of gunpowder and iron that made these two hours hideous.

Of the injury of our fire upon the enemy, except the facts that ours was the superior position, if not better served and constructed artillery, and that the enemy's artillery hereafter during the battle was almost silent, we knew little. Of course during the fight we often saw the enemy's caissons explode, and the trees, rent by our shot, crashing about his ears; but we can from them alone infer but little of general results. At three o'clock, almost precisely, the last shot hummed and bounded and fell, and the cannonade was over. The purpose of General Lee in all this fire of his guns-we know it now, we did not at the time so well-was to disable our artillery and break up our infantry upon the position of the Second Corps, so as to render them less an impediment to the sweep of his own brigades and divisions over our crest and through our lines. He probably supposed our infantry was massed behind the crest and the batteries; and hence his fire was so high and the fuses to his shells were cut so long, too long. The general failed in some of his plans in this behalf, as many generals have failed before. and will again. The artillery fight over, men began to breathe more freely, and to ask: "What next, I wonder?" The battery men were among their guns, some leaning to rest and wipe the sweat from their sooty faces; some were handling ammunition boxes and replenishing those that were empty. Some batteries from the artillery reserve were moving up to take the places of the disabled ones; the smoke was clearing from the crest There was a pause between acts, with the curtain down, soon to rise upon the great final act and catastrophe of Gettysburg. We had passed by the left of the Second Division coming from the front; when we crossed the crest, the enemy was not in sight, and all was still. We walked slowly along in rear of the troops. by the ridge, cut off now from a view of the enemy or his position, and were returning to the spot where we had left our horses. General Gibbon had just said that he inclined to the belief that the enemy was falling back, and that the cannonade was only

one of his noisy modes of covering the movement. I said that I thought that fifteen minutes would show that, by all his bowling, they did not mean retreat. We were near our horses when we noticed Brigadier-General Hunt, Chief of Artillery of the Army, near Woodruff's battery, swiftly moving about on horseback, and apparently in a rapid manner giving some orders about the guns. Thought we, what could this mean? In a moment afterwards we met Captain Wessels, and the orderlies who had our horses; they were on foot leading the horses. Captain Wessels was pale, and he said, excited: "General, they say the enemy's infantry is advancing." We sprang into our saddles; a score of bounds brought us upon the all-seeing crest. To say that none grew pale and held their breath at what we and they then saw, would not be true. Might not six thousand men be brave and without shade of fear, and yet, before a hostile eighteen thousand, armed, and not five minutes' march away, turn ashy white? None on that crest need now be told that the enemy is advancing! Every eve could see his legions, an overwhelming, resistless tide of an ocean of armed men, sweeping upon us! Regiment after regiment, and brigade after brigade, move from the woods and rapidly take their places in the lines forming the assault. Pickett's proud division, with some additional troops, holds their right; Pettigrew's (Heth's) their left. The first line, at short interval, is followed by a second, and that a third succeeds; and columns between support the lines. More than half a mile their front extends; more than a thousand yards the dull gray masses deploy, man touching man, rank pressing rank, and line supporting line. Their red flags wave; their horsemen gallop up and down; the arms of eighteen thousand men, barrel and bayonet, gleam in the sun-a sloping forest of flashing steel. Right on they move, as with one soul, in perfect order, without impediment of ditch or wall or stream, over ridge and slope, through orchard and meadow and cornfield, magnificent, grim, irresistible. All was orderly and still upon the crest; no noise and no confusion. The men had little need of commands; for the survivors of a dozen battles knew well enough what this array is front portended, and, already in their places, they would

be prepared to act when the right time should come. The click of the locks as each man raised the hammer to feel with his finger that the cap was on the nipple; the sharp jar as a musket touched a stone upon the wall when thrust, in aiming, over it; and the clinking of the iron axles, as the guns were rolled up by hand a little further to the front, were quite all the sounds that could be heard. Cap boxes were slid around to the front of the body; cartridge boxes opened; officers opened their pistol holsters. Such preparation, little more, was needed. The trefoil flags, colors of the brigade and divisions, moved to their places in the rear; but along the lines in front, the grand old ensign that first waved in battle at Saratoga, in 1777, and which these people coming would rob of half its stars, stood up, and the west wind kissed it as the sergeants sloped its lance towards the enemy. I believe that not one above whom it then waved but blessed his God that he was loyal to it, and whose heart did not swell with pride towards it, as the emblem of the Republic.

General Gibbon rode down the lines, cool and calm, and in an unimpassioned voice he said to the men: "Do not hurry. men, and fire too fast; let them come up close before you fire, and then aim low and steadily." The coolness of their general was reflected in the faces of his men. Five minutes had elapsed since first the enemy had emerged from the woods-no great space of time, surely, if measured by the usual standards by which men estimate duration-but it was long enough for us to note and weigh some of the elements of mighty moment that surrounded us; the disparity of numbers between the assailants and the assailed; that, few as were our numbers, we could not be supported or reinforced until support would not be needed, or would be too late; that upon the ability of the two trefoil divisions to hold the crest, and repel the assault, depended not only their own safety or destruction, but also the honor of the Army of the Potomac and defeat or victory at Gettysburg. Should these advancing men pierce our line, and become the entering wedge, driven home, that would sever our army asunder, what hope would there be afterwards, and where the blood-earned fruits of yesterday? It was long enough for the storm to drift across more than half the space that had first separated it from us. None, or all, of these considerations either depressed or elevated us. They might have done the former, had we been timid; the latter, had we been confident and vain. But we were there waiting and ready to do our duty; that done, results could not dishonor us.

Our skirmishers open a spattering fire along the front, and, fighting, retire upon the main line—the first drops, the heralds of the storm, sounding upon our windows. Then the thunders of our guns, first Arnold's, then Cushing's and Woodruff's and the rest, shake and reverberate through the air, and their sounding shells smite the enemy. The general said I had better go and tell General Meade of this advance. To gallop to General Meade's headquarters, to learn there that he had changed them to another part of the field, to despatch to him by the Signal Corps, in General Gibbon's name, the message, "The enemy is advancing his infantry in force upon my front," and to be again upon the crest, were but the work of a minute. All our available guns are now active, and from the fire of shells as the range grows shorter and shorter, they change to shrapnel, and from shrapnel to canister; but in spite of shells and shrapnel and canister, without wavering or halt, the hardy lines of the enemy continue to move on. Their guns make no reply to ours, and no charging shout rings out today, as is their wont; but the courage of these silent men amid our shot seems not to need the stimulus of other noise. The enemy's right flank sweeps near Stannard's bushy crest, and his concealed Vermonters rake it with a well-delivered fire of musketry. The gray lines do not halt or reply, but withdrawing a little from that extreme they still move on. And so across all that broad, open ground they have come, nearer and nearer, nearly half the way, with our guns bellowing in their faces, until now a hundred yards, no more, divide our ready left from their advancing right. The eager men there are anxious to begin. Let them. First Harrow's breastworks flame, then Hall's, then Webb's. As if our bullets were the fire coals that touched off their muskets, the enemy in front halts and his countless level barrels blaze back upon

The Second Division is struggling in battle. The rattling storm soon spreads to the right, and the blue trefoils are vying with the white. All along each hostile front, a thousand vards. with narrowest space between, the volleys blaze and roll; as thick the sound as when a summer hailstorm pelts the city root's; as thick the fire as when the incessant lightning fringes a summer cloud. When their infantry had opened fire our batteries soon became silent, and this without their fault, for they were foul by long previous use. They were the targets of the enemy's concentrated bullets, and some of them had expended all their canister; but they were not silent before Rhorty was killed, Woodruff had fallen mortally wounded, and Cushing, firing almost his last canister, had dropped dead among his guns, shot through the head by a bullet. The conflict is left to the infantry alone. Unable to find my general when I had returned to the crest after transmitting his message to General Meade, and while riding in the search, having witnessed the development of the fight from the first fire upon the left by the main lines, until all of the two divisions were furiously engaged, I gave up hunting as useless-I was convinced that General Gibbon could not be on the field; I left him mounted; I could easily have found him now had he so remained, but now, save myself, there was not a mounted officer near the engaged lines-and was riding towards the right of the Second Division, with purpose to stop there, as the most eligible position to watch the further progress of the battle, then to be ready to take part, according to my own notions, wherever and whenever occasion was presented. The conflict was tremendous, but I had seen no wavering in all our line. Wondering how long their ranks, deep though they were, could stand our sheltered volleys, I had come near my destination, when-great heaven! were my senses mad?-the larger portion of Webb's brigade-my God, it was true-there by the group of trees and the angles of the wall, was breaking from the cover of the works, and without order or reason, with no hand uplifted to check them, was falling back, a fear-stricken flock of confusion! The fate of Gettysburg hung upon a spider's single thread! A great, magnificent passion came on me at the

instant: not one that overpowers and confounds, but one that blanches the face and sublimes every sense and faculty. sword that had always hung idle by my side, the sign of rank only, in every battle, I drew, bright and gleaming, the symbol of command. Was not that a fit occasion and those fugitives the men on whom to try the temper of the Solingen steel? All rules and proprieties were forgotten, all considerations of person and danger and safety despised; for, as I met the tide of those rabbits, the flags of the enemy began to thicken and flaunt along the wall they had just deserted, and one was already waying over the guns of the dead Cushing. I ordered those men to "halt," and "face about," and "fire," and they heard my voice, and gathered my meaning, and obeyed my commands. On some unpatriotic backs, of those not quick of comprehension, the flat of my sabre fell, not lightly; and at its touch their love of country returned, and with a look at me as if I were the destroying angel as I might have become theirs, they again faced the enemy. General Webb soon came to my assistance. He was on foot, but he was active, and did all that one could do to repair the breach or to avert its calamity. The men that had fallen back, facing the enemy, soon regained confidence and became steady. This portion of the wall was lost to us, and the enemy have gained the cover of the reverse side, where he now stormed with fire. But Webb's men, with their bodies in part protected by the abruptness of the crest, now sent back in the enemy's face as fierce a storm. Some scores of the venturesome enemy that, in their first push at the wall, had dared to cross at the further angle, and those that had desecrated Cushing's guns, were promptly shot down, and speedy death met him who should raise his body to cross it again. At this point little could be seen of the enemy, by reason of his cover and the smoke, except the flash of his muskets and his waving flags. Those red flags were accumulating at the wall every moment, and they maddened us as the same color does the bull. Webb's men were falling fast, and he is among them to direct and encourage; but however well they may now do, with that walled enemy in front, with more than a dozen flags to Webb's three, it soon becomes apparent that

in not many minutes they will be overpowered, or that there will be none alive for the enemy to overpower. Webb has but three regiments, all small—the Sixty-ninth, Seventy-first and Seventy-second Pennsylvania—the One Hundred and Sixth Pennsylvania, except two companies, is not here today—and he must have speedy assistance, or this crest will be lost. Oh! where is Gibbon—where is Hancock—some general, anybody, with the power and the will to support this wasting, melting line? No general came, and no succor! I thought of Hayes upon the right; but from the smoke and roar along his front, it was evident he had enough upon his hands, if he stayed the inrolling tide of the enemy there. Doubleday upon the left was too far off, and too slow, and on another occasion I had begged him to send his idle regiments to support another line, battling with thrice its numbers, and this "Old Sumter Hero" had declined.

As a last resort I resolved to see if Hall and Harrow could not send some of their commands to reinforce Webb. I galloped to the left in the execution of my purpose, and as I attained the rear of Hall's line, from the nature of the ground there, and the position of the enemy, it was easy to discover the reason and the manner of this gathering of the enemy's flags in front of Webb. The enemy, emboldened by his success in gaining our line by the group of trees and the angle of the wall, was concentrating all his right against, and was further pressing, that point. There was the stress of his assault—there would he drive his fiery wedge to split our line. In front of Harrow's and Hall's brigades he had been able to advance no nearer than when he first halted to deliver fire; and these commands had not yielded an inch. To effect the concentration before Webb, the enemy would march the regiment on his extreme right of each of his line, by the left flank, to the rear of the troops, still halted and facing to the front, and so continuing to draw in his right. When they were all massed in the position desired, he would again face them to the front, and advance to the storming. This was the way he made the wall before Webb's line blaze with his battle flags, and such was the purpose then of his thick-crowding battalions. Not a moment must be lost. Colonel Hall I

found just in rear of his line, sword in hand, cool, vigilant, noting all that passed, and directing the battle of his brigade. The fire was constantly diminishing now in his front, in the manner, by the movement of the enemy, that I have mentioned, drifting to the right. "How is it going?" Colonel Hall asked me as I rope up. "Well, but Webb is hotly pressed, and must have support, or he will be overpowered. Can you assist him?" "Yes." "You cannot be too quick." "I will move my brigade at once." "Good." He gave the order, and in briefest time I saw five friendly colors hurrying to the aid of the imperilled three; and each color represented true, battle-tried men, that had not turned back from the enemy's fire that day nor yesterday, though their ranks were sadly thinned. To Webb's brigade, pressed back as it had been from the wall, the distance was not great from Hall's right. The regiments marched by the right flank. Colonel Hall superintended the movement in person. Colonel Devereaux coolly commanded the Nineteenth Massachusetts - his major, Rice, had already been wounded and carried off. Lieutenant-Colonel Macey, of the Twentieth Massachuetts, had just had his left hand shot off, and so Captain Abbott gallantly led over this fine regiment; the Forty-second New York followed their excellent colonel, Mallon, Lieutenant-Colonel Steele, Seventh Michigan, had just been killed, and this regiment, and the handful of the Fifty-ninth New York, followed their colors. The movement, as it did, attracting the enemy's fire, and executed in haste, as it must be, was difficult: but in reasonable time, and in order that is serviceable, if not regular, Hall's men are fighting gallantly side by side with Webb's, before the all-important point. I did not stop to see all this movement of Hall's, but from him I went further to the left, to the First Brigade. General Harrow I did not see, but his fighting men would answer my purpose as well. The Nineteenth Maine, the Fifteenth Massachusetts, the Eighty-second New York, and the shattered old thunderbolt, the First Minnesota-poor Farrell was dying then upon the ground where he had fallen-all men that I could find, I took over to the right at the double quick. As we were moving to, and near, the other

brigades of the division, from my position on horseback I could see that the enemy's right, under Hall's fire, was beginning to stagger and to break. The men saw, and as they swept to their places by the side of Hall's and opened fire, they roared, and this in a manner that said more plainly than words—for the deaf could have seen it in their faces, and the blind could have heard it in their voices—the crest is safe!

The whole division concentrated, and changes of position, and new phases, as well on our part as on that of the enemy, having, as indicated, occurred, for the purpose of showing the exact present posture of affairs some further description is necessary. Before the Second Division the enemy is massed, the main bulk of his force covered by the ground that slopes to his rear, with his front at the stone wall. Between his front and us extends the very apex of the crest. All there are left of the White Trefoil Division—vesterday morning there were three thousand eight hundred; this morning there were less than three thousand; at this moment there are somewhat over two thousand—twelve regiments in three brigades, are below, or behind the crest ,in such a position that by the exposure of the head and upper part of the body above the crest they can deliver their fire in the enemy's faces along the top of the wall. By reason of the disorganization incidental, in Webb's brigade, to his men having broken and fallen back, as mentioned, in the two other brigades to their rapid and difficult change of position under fire. and in all the division, in part, to severe and continuous battle, formation of companies and regiments in regular ranks is lost; but commands, companies, regiments, and brigades are blinded and intermixed—an irregular, extended mass—men enough, if in order, to form a line of four or five ranks along the whole front of the division. The twelve flags of the regiments wave defiantly at intervals along the front; at the stone wall, at unequal distances from ours of forty, fifty or sixty yards, stream nearly double this number of battle flags of the enemy. These changes accomplished on either side, and the concentration complete, although no cessation or abatement of the general din of conflict since the commencement had at any time been appreciable, now

it was as if a new battle, deadlier, stormier than before, had sprung from the body of the old; a young phænix of combat, whose eves stream lightning, shaking his arrowy wings over the yet glowing ashes of his progenitor. The jostling, swaying lines on either side boil, and roar, and dash their foamy spray, two hostile billows of a fiery ocean. Thick flashes stream from the wall: thick volleys answer from the crest. No threats or expostulation now; only example and encouragement. All depths of passion are stirred, and all combative fire, down to their deep foundations. Individuality is drowned in a sea of clamor; and timid men, breathing the breath of the multitude, are brave. The frequent dead and wounded lie where they stagger and fall; there is no humanity for them now, and none can be spared to care for them. The men do not cheer, or shout—they growl; and over that uneasy sea, heard with the roar of musketry, sweeps the muttered thunder of a storm of growls. Webb, Hall, Devereaux, Mallon, Abbott, among the men where all are heroes, are doing deeds of note. Now the loyal wave rolls up as if it would overleap its barrier, the crest; pistols flash with the muskets. My "Forward to the wall!" is answered by the rebel counter-command, "Steady, men," and the wave swings back. Again it surges, and again it sinks. These men of Pennsylvania, on the soil of their own homesteads, the first and only ones to flee the wall, must be the first to storm it. The color sergeant of the Seventy-second Pennsylvania, grasping the stump of the severed lance in both his hands, waved the flag above his head, and rushed toward the wall. "Will you see your color storm the wall alone?" One man only started to follow. Almost half way to the wall, down go color bearer and color to the ground-the gallant sergeant is dead. The line springs; the crest of the solid ground, with a great roar, heaves forward its maddened load—men, arms. smoke, fire, a fighting mass; it rolls to the wall; flash meets flash; the wall is crossed; a moment ensues of thrusts, yells, blows, shots, an undistinguished conflict, followed by a shout, universal, that makes the welkin ring again; and the last and bloodiest fight of the great battle of Gettysburg is ended and won.

Many things cannot be described by pen or pencil; such a

fight is one. Some hints and incidents may be given, but a description or picture, never. From what is told the imagination may for itself construct the scene; otherwise he who never saw, can have no adequate idea of what such a battle is.

When the vortex of battle passion had subsided, hopes, fears, rage, joy, of which the maddest and the noisiest was the last, and we were calm enough to look about us, we saw that, as with us, the fight with the Third Division was ended; and that in that division was a repetition of the scenes immediately about us. In that moment the judgment almost refused to credit the senses. Are these abject wretches about us, whom our men are now disarming, and driving together in flocks, the jaunty men of Pickett's Division, whose steady lines and flashing arms, but a few moments since, were sweeping up the slope to destroy us? We know, but so sudden has been the transition we yet can scarce believe.

Just as the fight was over, and the first outburst of victory had a little subsided, when all in front of the crest was noise and confusion, prisoners being collected, small parties in pursuit of them far down into the field, flags waving, officers giving quick, sharp commands to their men, I stood apart for a few moments upon the crest, by that group of trees which ought to be historic forever, a spectator of the thrilling scenes around. Some few musket shots were still heard in the Third Division; and the enemy's guns, almost silent since the advance of his infantry, until the moment of his defeat, were dropping a few sullen shells among friend and foe upon the crest. Near me, saddest sight of the many of such a field, and not in keeping with all this noise, were mingled, alone, the thick dead of Maine, and Minnesota, and Michigan, and Massachusetts, and the Empire and Keystone States, who, not yet cold, with the blood still oozing from their death wounds, had given their lives to the country upon that stormy field. So mingled upon that crest let their honored graves be. Look, with me, about us. These dead have been avenged already. Where the long lines of the enemy's thousands so proudly advanced, see now how thick the silent men of gray are scattered. It is not an hour since those legions were

sweeping along so grandly-now sixteen hundred of their fiery mass are strewn among the trampled grass, dead as the clods they load; more than seven thousand, probably eight thousand, are wounded, some there with the dead in our hands, some fugitive far towards the woods, among them Generals Pettigrew, Garnett, Kemper and Armistead, the last three mortally, and the last one in our hands-"Tell General Hancock," he said to Lieutenant Mitchell, Hancock's aide-de-camp, to whom he handed his watch, "that I know I did my country a great wrong when I took up arms against her, for which I am sorry, but for which I cannot live to atone." Four thousand not wounded are prisoners of war; more in number of the captured than the captors. Our men are still "gathering them in." Some hold up their hands, or a handkerchief, in sign of submission; some have hugged the ground to escape our bullets, and so are taken; few made resistance after the first moment of our crossing the wall; some vield submissively with good grace, some with grim, dogged aspect, showing that, but for the other alternative, they would not submit to this. Colonels, and all less grades of officers, in the usual proportions, are among them, and all are being stripped of their arms. Such of them as escaped wounds and capture are fleeing, routed and panic-stricken, and disappearing in the woods, Small arms, more thousands than we can count, are in our hands. scattered over the field.

Such was really the closing scene of the grand drama of Gettysburg. After repeated assaults upon the right and the left, where, and in all of which, repulse had been his own success, this persistent and presuming enemy forms his chosen troops, the flower of his army, for a grand assault upon our center. The manner and the result of such assault have been told—a loss to the enemy of from twelve thousand to fourteen thousand, killed, wounded and prisoners, and of over thirty battle-flags. This was accomplished by not over six thousand men, with a loss on our part of not over two thousand five hundred killed and wounded.

Would to Heaven Generals Hancock and Gibbon could have stood there where I did, and have looked upon that field! It

would have done two men, to whom the country owes much, good to have been with their men in that moment of victory, to have seen the results of those dispositions which they had made, and of that splendid fighting which men schooled by their discipline had executed. But they are both severely wounded, and have been carried from the field. One person did come that I was glad to see there; and he was no less than Major-General Meade, whom the Army of the Potomac was fortunate enough to have at that time to command it. See how a great general looked upon the field, and what he said and did, at the moment, and when he learned of his great victory.

General Meade rode up, accompanied alone by his son, who is his aide-de-camp—an escort, if select, not large for a commander of such an army. The principal horseman was no bedizened hero of some holiday review, but he was a plain man, dressed in a serviceable summer suit of dark blue cloth, without badge or ornament, save the shoulder straps of his grade, and a light, straight sword of a general, or general staff officer. He wore heavy high top boots and buff gauntlets, and his soft black felt hat was slouched down over his eyes. His face was very white, not pale, and the lines were marked and earnest, and full of care.

Then the work of the field went on. First the prisoners were collected and sent to the rear. Collected, the prisoners began their dreary march, a miserable, melancholy stream of dirty gray to pour over the crest to our rear. Many of their officers were well-dressed, fine, proud gentlemen, such men as it would be a pleasure to meet when the war is over. I had no desire to exult over them, and pity and sympathy were the general feelings of us all over the occasion. The cheering of our men, and the unceremonious handling of the captive flags, were probably not gratifying to the prisoners, but not intended for taunt or insult to the men; they could take no exception to such practices. When the prisoners were turned to the rear and were crossing the crest, Lieutenant-Colonel Morgan, General Hancock's chief of staff, was conducting a battery from the artillery reserve towards the Second Corps. As he saw the men in gray coming

over the hill, he said to the officer in command of the battery: "See up there. The enemy has carried the crest. See them come pouring over. The old Second Corps has gone, and you had better get your battery away from here as quickly as possible, or it will be captured." The officer was actually giving the order to his men to move back, when closer observation discovered that the graycoats that were coming had no arms, and then the truth flashed upon the minds of the observers. The same mistake was made by others.

In view of the results there that day—the successes of the arms of the country—would not the people of the whole country, standing then upon the crest with General Meade, have said with him, "Thank God?"

I have no knowledge, and little notion, of how long a time elapsed from the moment the fire of the infantry commenced until the enemy was entirely repulsed in this grand assault. I judge, from the amount of fighting, that probably the fight was of nearly an hour's duration, but I cannot tell, and I have seen none who knew. The time seemed but a very few minutes when the battle was over.

When the prisoners were cleared away, and order was again established upon the crest, where the conflict had impaired it, until between five and six o'clock, I remained upon the field directing troops to their positions, in conformity to the orders of General Meade. The enemy appeared no more in front of the Second Corps; but while I was engaged as I have mentioned, further to our left some considerable force of the enemy moved out and made a show of attack. Our artillery, now in good order again, in due time opened fire, and the shells scattered the "Butternuts," as clubs do the gray snow-birds of winter, before they came within range of our infantry. This, save unimportant outpost firing, was the last of the battle.

Of the pursuit of the enemy, and the movements of the army subsequent to the battle, until the crossing of the Potomac by Lee, and the closing of the campaign, it is not my purpose to write. Suffice it, that on the night of the 3rd of July the enemy withdrew his left, Ewell's corps, from our front, and on the

morning of the 4th we again occupied the village of Gettysburg, and on that national day victory was proclaimed to the country; that floods of rain on that day prevented army movement of any considerable magnitude, the day being passed by our army in position upon the field, in burying our dead and some of those of the enemy, and in making the movements already indicated; that on the 5th the pursuit of the enemy was commenced, his dead were buried by us, and the corps of our army, upon various roads, moved from the battlefield.

With a statement of some of the results of the battle, as to losses and captures, and of what I saw in riding over the field when the army was gone, my account is done.

Our own losses in "killed, wounded and missing" I estimate at twenty-three thousand. Of the "missing" the larger proportion were prisoners lost on the 1st of July. Our loss in prisoners, not wounded, probably was four thousand. The losses were distributed among the different army corps about as follows: In the Second Corps, which sustained the heaviest loss of any corps, a little over four thousand five hundred, of whom the "missing" were a mere nominal number; in the First Corps, a little over four thousand, of whom a good many were "missing": in the Third Corps, four thousand, of whom some were "missing"; in the Eleventh Corps, four thousand, of whom the most were "missing"; and the rest of the loss, to make the aggregate mentioned, were shared by the Fifth, Sixth and Twelfth Corps and the cavalry. Among these the "missing" were few, and the losses of the Sixth Corps and the cavalry were light. I do not think the official reports will show my estimate of our losses to be far from correct, for I have taken great pains to question staff officers upon the subject, and have learned approximate numbers from them. We lost no gun or flag, that I have heard of, in all the battle. Some small arms, I suppose, were lost on the 1st of July.

The enemy's loss in killed, wounded, and prisoners I estimate at forty thousand, and from the following data, and for the following reasons: So far as I can learn we took ten thousand prisoners, who were not wounded—many more than these were

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captured, but several thousands of them were wounded. I have, so far as practicable, ascertained the number of dead the enemy left upon the field, approximately, by getting the reports of different burying parties. I think the dead upon the field were five thousand; almost all of whom, save those killed on the 1st of July, were buried by us, the enemy not having them in their possession. In looking at a great number of tables of killed and wounded in battles, I have found that the proportion of the killed to the wounded is as one to five, or more than five; rarely less than five. So with the killed at the number stated, twenty-five thousand would probably be wounded; hence the aggregate that I have mentioned. I think fourteen thousand of the enemy, wounded and unwounded, fell into our hands. Great numbers of his small arms, two or three big guns, and forty or more was there ever such bannered harvest?-of his regimental battle-flags, were captured by us. Some day, possibly, we may learn the enemy's loss, but I doubt if he will ever tell truly how many flags he did not take home with him. I have great confidence, however, in my estimates, for they have been carefully made, and after much inquiry, and with no desire or motive to overestimate the enemy's loss.

The magnitude of the armies engaged, the number of the casualties, the object sought by the enemy, the result, will all contribute to give Gettysburg a place among the great historic battles of the world. That General Meade's concentration was rapid—over thirty miles a day were marched by several of the corps-that his position was skillfully selected, and his dispositions good, that he fought the battle hard and well, that his victory was brilliant and complete, I think all should admit. I cannot but regard it as highly fortunate to us, and commendable in General Meade, that the enemy was allowed the initiative, the offensive in the main battle; that it was much better to allow them, for his own destruction, to come up and smash his lines and columns upon the defensive solidity of our position, than it would have been to hunt him, for the same purpose, in the woods, or to unearth him from his rifle-pits. In this manner our losses were lighter and his heavier, than if the case had been

reversed. And whatever the books may say of troops fighting the better who make the attack, I am satisfied that in this war, Americans, the enemy as well as ourselves, are best on the defensive. The proposition is deducible from the battles of the war, I think, and my observation confirms it.

But men there are who think that nothing was gained or done well in this battle, because some other general did not have the command, or because any portion of the army of the enemy was permitted to escape capture or destruction. As if one army of a hundred thousand men could encounter another of the same number, of as good troops, and annihilate it! Military men do not claim or expect this; but the sensational paragraphers do; the doughty knights of purchasable newspaper quills; the formidable warriors from the brothels of politics; men of much warlike experience against—honesty and honor; of profound attainments in-ignorance; who have the maxims of Napoleon, whose spirit they as little understand as they do most things, to quote to prove all things; but who, unfortunately, have much influence in the country and with the government, and so over the army. It is very pleasant for these people, no doubt, at safe distances from guns, in the enjoyment of a lucrative office, or of a fraudulently obtained government contract, surrounded by the luxuries of their own firesides, where mud and flooding storms and utter weariness never penetrate, to discourse of battles, and how campaigns should be conducted, and armies of the enemy should be destroyed. But it should be enough, perhaps, to say that men here or elsewhere, who have knowledge enough of military affairs to entitle them to express an opinion on such matters, and accurate information enough to realize the nature and the means of this desired destruction of Lee's army, before it crossed the Potomac into Virginia, will be mostly likely to vindicate the Pennsylvania campaign of General Meade, and to see that he accomplished all that could have been reasonably expected of any general, of any army. Complaint has been, and is, made specifically against Meade, that he did not attack Lee near Williamsport, before he had time to withdraw across the river. These were the facts concerning the matter:

The 13th of July was the earliest day when such an attack, if practicable at all, could have been made. The time before this, since the battle, had been spent in moving the army from the vicinity of the field, finding something of the enemy, and concentrating before him. On that day the army was concentrated, and in order of battle, near the turnpike that leads from Sharpsburg to Hagarstown, Md., the right resting at or near the latter place, the left near Jones's Cross-roads, some six miles in the direction of Sharpsburg, and in the following order from left to right: the Twelfth Corps, the Second, the Fifth, the Sixth, the First, the Eleventh—the Third being in reserve behind the Second.

The mean distance to the Potomac was some six miles, and the enemy was between Meade and the river. The Potomac, swelled by the recent rain, was boiling and swift and deep. I have not the least doubt but that General Meade would have liked to drown them all, if he could, but they were unwilling to be drowned, and would fight first. To drive them into the river, then, they must first be routed. General Meade, I believe, favcred an attack upon the enemy at this time, and he summoned his corps commanders to a council upon the subject. The first Corps was represented by Wadsworth; the Second by William Hays; the Third by French; the Fifth by Sykes; the Sixth by Sedgwick; the Eleventh by Howard; the Twelfth by Slocum; and the cavalry by Pleasonton. Of the eight generals, three, Wadsworth, Howard and Pleasonton, were in favor of immediate attack: and five, Hays, French, Sykes, Sedgwick, and Slocum, were not in favor of attack until better information was obtained of the position and situation of the enemy. Of the pros, Wadsworth only temporarily represented the First Corps, in the brief absence of Newton, who, had a battle occurred, would have commanded; Pleasonton, with his horses, would have been a spectator only; and Howard had lost so large a portion of the Eleventh Corps at Gettysburg, that he could scarcely have been relied upon to do effective work with his command. Such was the position of those who felt sanguinely inclined. Of the cons. were all of the fighting generals of the fighting corps save the

First. This, then, was the feeling of these generals: All who would have had no responsibility or part, in all probability, hankered for a fight; those who would have had both part and responsibility, did not. The attack was not made. At daylight on the morning of the 14th, strong reconnoissances from the Twelfth, Second and Fifth Corps were the means of discovering that between the enemy, except a thousand or fifteen hundred of his rear-guard, who fell into our hands, and the Army of the Potomac, rolled the rapid unbridged river. General Pettigrew was here killed. The enemy had constructed bridges, had crossing during all the preceding night, but so close were our cavalry and infantry upon him in the morning that the bridges were destroyed before his rear guard had all crossed.

Among the considerations influencing these generals against the propriety of attack at that time were probably the following: The army was wearied and worn down by four weeks of constant forced marching or battle, in the midst of heat, mud and drenching showers, burdened with arms, accoutrements, blankets, sixty to a hundred cartridges, and five to eight days' rations. What such weariness means, few save soldiers know. Since the battle the army had been constantly diminished by sickness or prostration, and by more straggling than I ever saw before. Poor fellows! they could not help it. The men were near the point where further efficient physical exertion was quite impossible. Even the sound of the skirmishing, which was almost constant, and the excitement of the impending battle, had no effect to arouse for an hour the exhibition of their wonted former vigor. The enemy's loss in battle, it is true, had been far heavier than ours, but his army was less weary than ours, for in a given time since the first of the campaign it had marched far less, and with lighter loads. They are accustomed to hunger and nakedness, customs to which our men do not take readily. And the enemy had straggled less, for the men were going away from battle, and towards home; and for them to straggle was to go into captivity, whose end they could not conjecture. The enemy were somewhere in position, in a ridgy, wooded country, abounding in strong, defensive positions, his main bodies concealed, protected

by riflepits and epaulements acting strictly on the defensive. His dispositions, his positions, even, with any considerable degree of accuracy, were unknown; nor could they be known, except by reconnoissances in such force, and carried to such extent, as would have constituted them attacks, liable to bring on at any moment a general engagement, and at places where we were least prepared, and least likely to be successful. To have had a battle there, then, General Meade would have had to attack a cunning enemy in the dark, where surprises, undiscovered rifle-pits and batteries, and unseen bodies of men, might have met his forces at every point. With his not greatly superior numbers, under such circumstances, had General Meade attacked, would be have been victorious? The vote of those generals at the council shows their opinion. My own is, that he would have been repulsed with heavy loss, with little damage to the enemy. Such a result might have satisfied the bloody politicians better than the end of the campaign as it was; but I think the country did not need that sacrifice of the Army of the Potomac at that time,—that enough odor of sacrifice came up to its nostrils from the First Fredericksburg field to stop their snuffing for some time. I felt the probability of defeat strongly at the time, when we all supposed a conflict would certainly ensue; for always before a battle, at least it so appears to me, some dim presentiment of results, some unaccountable foreshadowing, pervades the army,—I never knew the result to prove untrue,-which rests with the weight of conviction. Whether such shadows are cause, or consequence, I shall not pretend to determine; but when, as they often are, they are general, I think they should not be wholly disregarded by the commanders. I believe the Army of the Potomac is always willing, often eager, to fight the enemy, whenever, as it thinks, there is a fair chance for victory; that it always will fight, let come victory or defeat, whenever it is ordered so to do. Of course, the army, both officers and men, had very great disappointment and very great sorrow that they escaped,—so it was called,—across the river. The disappointment was genuine, at least to the extent that disappointment is like surprise; but the sorrow, to judge by looks, tones and actions, rather than by words, was not of that

deep, sable character for which there is no balm. Would it be an imputation upon the courage or patriotism of this army if it was not rampant for fight at this paritcular time and under the existing circumstances? Had the enemy stayed upon the left bank of the Potomac twelve hours longer there would have been a great battle there near Williamsport, on the 14th of July. After such digression, if such it is, I return to Gettysburg.

As good generalship is claimed for General Meade in this battle, so was the conduct of his subordinate commanders good. I know and have heard of no bad conduct or blundering on the part of any officer, unless the unauthorized movement of General Sickles, on the 2d of July, may be so characterized. The Eleventh Corps was outnumbered and outflanked on the first day, and when forced to fall back from their position, did not do it with the firmness and steadiness which might have been expected of veteran troops. With this exception, and some minor cases of very little consequence in the general result, our troops, whenever and wherever the enemy came, stood against them with storms of impassable fire. Such was the infantry, such the artillery. The cavalry did less, but it did all that was required.

The enemy, too, showed a determination and valor worthy of a better cause; their conduct in this battle even makes me proud of them as Americans. They would have been victorious over any but the best of soldiers. Lee and his generals presumed too much upon some past successes, and did not estimate how much they were due, on their part, to position, as at Fredericksburg, or on our part to bad generalship, as at the Second Bull Run and Chancellorsville.

The fight of the 1st of July we do not, of course, claim as a victory; but even that probably would have resulted differently had Reynolds not been struck. The success of the enemy in the battle ended with the 1st of July. They were joyous and jubilant,—so said our men in their hands, and the citizens of Gettysburg,—at their achievements on that day. Fredericksburg and Chancellorsville were remembered by them. They saw victory already won, or only to be snatched from the "raw Pennsylvania Militia," as they thought they were when they saw them run; and already

the spires of Baltimore and the dome of the national capitol were forecast upon their glad vision, only two or three days' march away through the beautiful valleys of Pennsylvania and "my" Maryland. Was there ever anything so fine before! How pleasant it would be to enjoy the poultry and the fruit; the meats, the cakes, the beds, the clothing, the whiskey, without price, in this rich land of the Yankee! It would indeed! But on the 2d of July something of a change came over the spirit of their dreams. They were surprised at results, and talked less and thought more, as they prepared supper that night. After the fight of the 3d, they talked only of the means of their own safety from destruction. Pickett's splendid division had been almost annihilated, they said; and they talked not of how many were lost, but of who had escaped. They talked of those "Yanks" that had clubs on their flags and caps,—the trefoils of the Second Corps, that are like clubs in cards.

The battle of Gettysburg is distinguished in this war, not only as by far the greatest and severest conflict that has occurred, but for some other things that I may mention. The fight of the 2d of July, on the left, which was almost a separate and complete battle, is, so far as I know, alone in the following particulars; the numbers of men engaged at one time, and the enormous losses that occurred in killed and wounded, in the space of about two hours. If the truth could be obtained, it would probably show a much larger number of casualties in this, than my estimate in a former part of these sheets. Few battles of the war have had so many casualties altogether as those of the two hours on the 2d of July. The 3d of July is distinguished. Then occurred the "great cannonade,"-so we call it, and so it would be called in any war and in almost any battle. And besides this, the main operations that followed have few parallels in history, none in this war, of the magnitude and magnificence of the assault, single and simultaneous, the disparity of numbers engaged, and the brilliancy, completeness, and overwhelming character of the result in favor of the side numerically weakest. I think I have not, in giving the results of this encounter, over-estimated the number or the losses of the enemy. We learned on all hands, by prisoners, and by their newspapers, that over two divisions moved up to the assault.—Pickett's and Pettigrew's,—that this was the first engagement of Pickett's in the battle, and the first of Pettigrew's save a light participation on the 1st of July. Their divisions usually number nine or ten thousand, or did at that time, as we understood. Then I have seen something of troops, and think I can estimate the number somewhat. The number of the enemy killed here I have estimated in this way: The second and third divisions of the Second Corps buried the enemy's dead in their own front, and where they fought upon their own grounds. By count they buried over one thousand eight hundred. I think no more than about two hundred of these were killed on the 2nd of July in front of the Second Division, and the rest must have fallen upon the 3d. My estimates that depend upon this contingency may be erroneous, but to no great extent. The rest of the particulars of this assault, our own losses and our captures, I know are approximately accurate. Yet the whole sounds like romance, a grand stage-piece of blood.

Of all the Corps d'Armee, for hard fighting, severe losses, and briliant results, the palm should be, as by the army it is, awarded to the "Old Second." It did more fighting than any other corps, inflicted severer losses upon the enemy, in killed and wounded, and sustained a heavier like loss; and captured more flags than all the rest of the army, and almost as many prisoners as the rest of the army. The loss of the Second Corps in killed and wounded in this battle—there is no other test of hard fighting—was almost as great as that of all General Grant's forces, in the battles that preceded, and, in the siege of Vicksburg. Three-eights of the whole corps were killed and wounded. Why does the Western Army suppose that the Army of the Potomac does not fight? Was ever a more absurd supposition? The Army of the Potomac is grand! Give it good leadership—let it alone—and it will not fail to accomplish all that reasonable men desire.

Of Gibbon's white trefoil division, if I am not cautious, I shall speak too enthusiastically. This division has been accustomed to distinguished leadership. Sumner, Sedgwick, and Howard, have honored, and been honored by, its command. It

was repulsed under Sedgwick at Antietam, and under Howard at Fredericksburg; it was victorious under Gibbon at the Second Fredericksburg, and at Gettysburg. At Gettysburg its loss in killed and wounded was over one thousand seven hundred, near one-half of all engaged; it captured seventeen battle-flags and two thousand three hundred prisoners. Its bullets hailed on Pickett's Division and killed or mortally wounded four of their generals,—Barksdale on the 2d of July, with the three on the 3d, Armistead, Garnett, and Kemper. In losses, in killed and wounded, and in capture from the enemy of prisoners and flags, it stands pre-eminent among all the divisions at Gettysburg.

Under such generals as Hancock and Gibbon brilliant results may be expected. Will the country remember them? Attempts have been made to give the credit of saving the day at Gettysburg to this and that officer who participated in the battle, and even the President is believed to have been deceived by unfounded claims. But in the light of this truthful narrative can either the President or the country be insensible of the transcendent merit of General Meade and his brave subordinates?

About six o'clock on the afternoon of the 3d of July, my duties done upon the field, I quitted it to go to the general. My brave horse Dick—poor creature! his good conduct in the battle that afternoon had been complimented by a brigadier,—was a sight to see. He was literally covered with blood. Struck repeatedly, his right thigh had been ripped open in a ghastly manner by a piece of shell, and three bullets were lodged deep in his body; and from his wounds the blood oozed and ran down his sides and legs, and with the sweat formed a bloody foam. Dick's was no mean part in that battle. Good conduct in men under such circumstances as he was placed might result from a sense of duty; his was the result of his bravery. Most horses would have been unmanageable, with the flash and roar of arms about, and the shouting. Dick was utterly cool, and would have obeyed the rein had it been a straw. To Dick belongs the honor of first mounting that stormy crest before the enemy, not forty vards away, whose bullets smote him; and of being the only horse there during the heat of the battle. Even the enemy noticed Dick, and

one of their reports of the battle mentions the "solitary horseman," who rallied our wavering line. He enabled me to do twelve times as much as I could have done on foot. It would not be dignified for an officer on foot to run; it is entirely so, mounted, to gallop. I do not approve of officers dismounting in battle, which is the time of all when they most need to be mounted, for thereby they have so much greater facilities for being everywhere present. Most officers, however, in close action, dismount. Dick deserves well of his country, and one day should have a horse monument. If there be, "ut sapientibus placet," an equine elysium, I will send to Charon the brass coin, the fee for Dick's passage over, that on the other side of the Styx, in those shadowy clover fields, he may nibble the blossoms forever.

I had been struck upon the thigh by a bullet, which I think must have glanced, and partially spent its force, upon my saddle. It had pierced the thick cloth of my trousers and two thicknesses of underclothing, but had not broken the skin; leaving me with an enormous bruise, that for a time benumbed the entire leg. At the time of receiving it, I heard the thump, and noticed it and the hole in the cloth, into which I thrust my finger; and I experienced a feeling of relief, I am sure, when I found that my leg was not pierced. I think, when I dismounted from my horse after that fight, that I was no very comely specimen of humanity. Drenched with sweat, the white of battle, by the reaction, now turning to burning red. I felt like a boiled man; and had it not been for the exhilaration at results, I should have been miserable. This kept me up, however, and having found a man to transfer the saddle from poor Dick, who was now disposed to lie down by loss of blood and exhaustion, to another horse, I hobbled on among the hospitals in search of General Gibbon.

Oh, sorrowful was the sight to see so many wounded! The whole neighborhood in rear of the field became one vast hospital, of miles in extent. Some could walk to the hospitals; such as could not were taken upon stretchers, from the places where they fell, to selected point, and thence the ambulances bore them, a miserable load, to their destination. Many were brought to the buildings along the Taneytown road, and, too badly wounded to

be carried further, died, and were buried there; Union and rebel soldiers together. At every house and barn and shed the wounded were; by many a cooling brook, on many a shady slopes or grassy glade, the red flags beckoned them to their tented asylums; and there they gathered in numbers, a great army; a mutilated, bruised mass of humanity. Men with gray hair and furrowed cheeks, and soft-lipped, beardless boys, were there; for these bullets have made no distinction between age and youth. Every conceivable wound that iron and lead can make, blunt or sharp, bullet, ball and shell, piercing, bruising, tearing, was there; sometimes so light that a bandage and cold water would restore the soldier to the ranks again; sometimes so severe that the poor victim in his hopeless pain, remediless save by the only panacea for all mortal sufferings, invoked that. The men are generally cheerful, and even those with frightful wounds often are talking with animated faces of nothing but the battle and the victory; but some are downcast, their faces distorted with pain. Some have undergone the surgeon's work; some, like men at a ticket office, awaiting patiently their turn, to have an arm or a leg cut off. Some walk about with an arm in a sling; some sit idly upon the ground; some at full length lie upon a little straw, or a blanket, with their brawny, now blood-stained, limbs bare, and you may see where the minie bullet has struck, or the shell has torn. From a small round hole upon many a manly breast the red blood trickles; but the pallid cheek, the hard-drawn breath and dimclosed eyes, tell how near the source of life it has gone. The surgeons with coats off and sleeves rolled up, and the hospital attendants with green bands upon their caps, are about their work; and their faces and clothes are spotted with blood; and though they look weary and tired, their work goes systematically and steadily on. How much and how long they have worked, the pile of legs, arms, feet, hands, fingers, about partially tell. Such sounds are heard, sometimes—you would not have heard them upon the field-as convince that bodies, bones, sinews, and muscles are not made of insensible stone. Near by appears a row of small fresh mounds placed side by side. They were not there day before yesterday; they will become more numerous every day.

Such things I saw as I rode along. At last I found the generals. General Gibbon was sitting in a chair that had been borrowed somewhere, with his wounded shoulder bare, and an attendant was bathing it with cold water. General Hancock was near by in an ambulance. They were at the tents of the Second Corps hospitals, which were on Rock Run. As I approached General Gibbon, when he saw me he began to "hurrah," and wave his right hand; he had heard the result. I said: "O General! long and well may you wave"; and he shook me warmly by the hand. General Gibbon was struck by a bullet in the left shoulder, which had passed from the front, through the flesh, and out behind, fracturing the shoulder blade, and inflicting a severe but not dangerous wound. He thinks he was the mark of a sharp-shooter of the enemy, hid in the bushes near where he and I had sat so long during the cannonade; and he was wounded and taken off the field before the fire of the main lines in infantry had commenced; he being at the time he was hit, near the left of his division. General Hancock was struck a little later, near the same part of the field, by a bullet piercing and almost going through his thigh, without touching the bone, however. His wound was severe, also. He was carried back out of range, but before he would be carried off the field he lay upon the ground in sight of the crest, where he could see something of the fight, until he knew what would be the result. And there, at General Gibbon's request, I had to tell him and a large voluntary crowd of the wounded who pressed around, not for the wounds they showed, not rebuked for closing up to the generals, the story of the fight. I was nothing loath; and I must say, though I used sometimes before the war to make speeches, that I never had so enthusiastic an audience before. Cries of "good!" "glorious!" frequently interrupted me, and the storming of the wall was applauded by enthusiastic tears, and the waving of battered, bloody hands.

By the custom of the service, the general had the right to have me along with him, while away with his wound; but duty and inclination attracted me still to the field, and I obtained the general's consent to stay. Accompanying General Gibbon to Westminster, the nearest point to which railroad trains then ran,

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and seeing him transferred from an ambulance to the cars for Baltimore, on the 4th, the next day I returned to the field to his division, since his wounding in the command of General Harrow.

On the 6th of July, while my bullet bruise was yet too inflamed and sensitive for me to be good for much in the way of duty,—the division was then halted for the day some four miles from the field on the Baltimore turnpike,—I could not repress the desire or omit the opportunity to see again where the battle had been. With the right stirrup strap shortened in a manner to favor the bruised leg, I could ride my horse at a walk without serious discomfort. It seemed very strange upon approaching the horse-shoe crest again not to see it covered with the thousands of troops, and the horses and guns; but they were all gone,the armies, to my seeming, had vanished,—and on that lovely summer morning the stillness and silence of death pervaded the localities where so recently the shouts and the cannon had thundered. The recent rains had washed out many an unsightly spot and smoothed many a harrowed trace of the conflict; but one still needed no guide save eyes to follow the track of that storm which the storms of heaven were powerless soon to entirely efface. The spade and shovel, so far as a little earth for the human bodies would render their task done, had completed their work,—a great labor that,—but one still might see under some concealing bush or sheltering rock what once had been a man, and the thousands of stricken horses still lay scattered as they had died. The scattered small arms and accourrements had been collected and carried away, almost all that were of any value; but great numbers of bent and splintered muskets, rent knapsacks and haversacks, bruised canteens, shreds of caps, coats, trousers of blue or gray cloth, worthless belts and cartridge boxes. torn blankets, ammunition boxes, broken wheels, smashed timbers, shattered gun carriages, parts of harness,-of all that men or horses wear or use in battle,—were scattered broadcast over miles of the field. From these one could tell where the fight had been hottest. The rifle-pits and epaulements, and the trampled grass, told where the lines had stood, and the batteries; the former being thicker where the enemy had been than those of our construction. No soldier was to be seen, but numbers of civilians and boys, and some girls, even, were curiously loitering about the field, and their faces showed, not sadness or horror, but only staring wonder or smirking curiosity. They looked for mementos of the battle to keep, they said, but their furtive attempts to conceal an uninjured musket or untorn blanket—they had been told that all property left here belonged to the government—showed that the love of gain was an ingredient, at least, of their motive for coming here. Of course there was not the slightest objection to their taking anything they could find now, but their manrer of doing it was the objectionable thing. I could now understand why soldiers had been asked a dollar for a small strip of old linen to bind their own wounds and not be compelled to go off to the hospitals.

Never elsewhere upon any field have I seen such abundant evidences of a terrific fire of cannon and musketry as upon this. Along the enemy's position, where our shells and shot had struck during the cannonade of the third, the trees had cast their trunks and branches as if they had been icicles shaken by a blast; and graves of the enemy's making, and dead horses, and scattered accoutrements, showed that other things besides trees had been struck by our projectiles. I must say that, having seen the work of their guns upon the same occasion, I was gratified to see these things. Along the slope of Culp's Hill, in front of the position of the Twelfth, and the First Division of the First Corps, the trees were almost literally peeled, from the ground up some fifteen or twenty feet, so thick upon them were the scars the bullets had made. Upon a single tree, in several instances not over a foot and a half in diameter, I actually counted as many as two hundred and fifty bullet marks. The ground was covered by the little twigs that had been cut off by the hail-storm of lead. Such were the evidences of the storm under which Ewell's bold men assaulted our breastworks on the night of the 2d and the morning of the 3d of July. And those works looked formidable, zigzagging along those rocky crests, even now, when not a musket was behind them. What madness on the part of the enemy to

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have attacked them! All along through those bullet-stormed woods were interspersed little patches of fresh earth raised a foot or so above the surrounding ground. Some were very near in front of the works, and near by upon a tree, whose bark had been smoothed by an axe, written in red chalk, would be the words, not in fine hand-writing: "75 Rebils berid hear"; "#554 Rebs there," and so on. Such was the burial, and such the epitaph, of many of those famous men, once led by the mighty Stonewall Jackson. Oh, this damned rebellion will make brutes of us all, if it is not soon quelled! Our own men were buried in graves, not trenches; and upon a piece of board, or stave of a barrel, or bit of cracker box, placed at the head, were neatly cut or pencilled the name and regiment of the one buried in each. This practice was general; but of course there must be some exceptions, for sometimes the cannon's load had not left enough of a man to recognize or name. The reasons here for the more careful interment of our own dead than such as was given to the dead of the enemy are obvious, and I think satisfactory: Our own dead were usually buried not long after they fell, and without any general order to that effect. It was a work that the men's hearts were in, as soon as the fight was over, and opportunity offered, to hunt out their dead companions, to make them a grave in some convenient spot, and decently composed, with their blankets wrapped about them, to cover them tenderly with earth, and mark their resting place. Such burials were not without as scalding tears as ever fell upon the face of coffined mortality. The dead of the enemy could not be buried until after the close of the whole battle. The army was about to move-some of it was already upon the march before such burial commenced. Tools, save those carried by the pioneers, were many miles away with the trains, and the burying parties were required to make all haste in their work in order to be ready to move with their regiments. To make long, shallow trenches; to collect the enemy's dead, often hundreds in a place, and to cover them hastily with a little earth, without name, number, or mark, save the shallow mound above them-their names, of course, they did not knowwas the best that could be done. I should have been glad to

have seen more formal burial even of these men of the rebellion, both because hostilities should cease with death, and of the respect I have for them as my brave, though deluded, countrymen. I found fault with such burial at the time, though I knew that the best was done that could be under the circumstances; but it may perhaps soften somewhat the rising feelings upon this subject of any who may be disposed to share mine, that under similar circumstances, had the issue of the battle been reversed, our own dead would have had no burial at all at the hands of the enemy.

All was bustle and noise in the little town of Gettysburg as I entered it on my tour of the field. From the afternoon of the 1st to the morning of the 4th of July, the enemy was in possession. Very many of the inhabitants had, upon the first approach of the enemy, or upon the retirement of our troops, fled their homes, and the town, not to return until after the battle. Now the town was a hospital, where gray and blue mingled in about equal proportions. The public buildings, the court house, the churches, and many private dwellings, were full of wounded. There had been in some of the streets a good deal of fighting; and shells had riddled the houses from side to side. And the enemy had done his work of pillage there, too. In spite of the smooth-sounding general order of their commander, enjoining a sacred regard for private property,—the order was really good, and would sound marvelously well abroad, or in history,-all stores of drugs and medicine, of clothing, tinware, and all groceries, had been rifled and emptied, without pay or offer of recompense. But the people, the women and children that had fled, were returning, or had returned, to their homes,—such homes! and amid the general havoc were restoring, as they could, order to the desecrated firesides. And the faces of them all plainly told that, with all they had lost, and bad as was the condition of all things they found, they were better pleased with such homes than with wandering houseless in the fields. All had treasures of incidents of the battle, and of the occupation of the enemy, wonderful sights, escapes, witnessed encounters, wounds, the marvelous passage of shells and bullets,—which, upon the ask-

ing, or even without, they were willing to share with the stranger. I heard of no more than one or two cases of personal injury received by any of the inhabitants. One woman was said to have been killed while at her wash-tub, sometime during the battle; but probably by a stray bullet, coming a very long distance, from our own men. For the next hundred years Gettysburg will be rich in legends and traditions of the battle. I rode through the cemetery on "Cemetery Hill." How those quiet sleepers must have been astounded in their graves when the twenty-pound Parrott guns thundered over them, and the solitary shot crushed their grave-stones! The flowers, roses, and creeping vines, that pious hands had planted to bloom and shed their odors over the ashes of dear ones gone, were trampled upon the ground, and black with the cannon's soot. A dead horse lay by the marble shaft, and over it the marble finger pointed to the sky. marble lamb that had slept its white sleep on the grave of a child now lies blackened upon a broken gun carriage. Such are the incongruities and jumblings of battle.

I looked away to the group of trees, and a strange fascination led me thither. How thick are the marks of battle as I approach,—the graves of the men of the Third Division of the Second Corps, the splintered oaks, the scattered horses; seventy-one dead horses were on a spot some fifty yards square, near the position of Woodruff's Battery, and where he fell.

I stood solitary upon the crest by "the trees," where less than three days ago I had stood before; but now how changed is all the eye beholds. Do these thick mounds cover the fiery hearts that in the battle rage swept the crest and stormed the wall? I read their names,—them, alas, I do not know,—but I see the regiments marked on their frail monuments,—"20th Mass. Vols," "69 P. V.," "1st Minn. Vols.," and the rest,—they are all represented, and, as they fought, commingle here. So I am not alone, —these, my brethren of the fight are with me. Sleep, noble brave! The foe shall not desecrate your sleep. Yonder thick trenches will hold them. As long as patriotism is a virtue, and treason a crime, your deeds have made this crest, your resting place, hallowed ground.

But I have seen and said enough of this battle. The unfortunate wounding of my general so early in the action of the 3d of July, leaving important duties, which in the unreasoning excitement of the moment I in part assumed, enable me to do for the successful issue something which under other circumstances would not have fallen to my rank or place. Deploring the occasion for taking away from the division in that moment of its need its soldierly, appropriate head, so cool, so clear, I am yet glad, as that was to be, that his example and his tuition have not been entirely in vain to me, and that my impulses then prompted me to do somewhat as he might have done had he been on the field. The encomiums of officers, so numerous, and some of so high rank, generously accorded me for my conduct upon that occasion,—I am not without vanity,—were gratifying. My position as a staff officer gave me an opportunity to see much—perhaps as much as any one person-of that conflict. My observations were not so particular as if I had been attached to a smaller command; not so general as may have been those of a staff officer of the general commanding the army, but of such as they were, my heart was there and I could not do less than write about them, —in the intervals between marches, and during the subsequent repose of the army, at the close of the campaign, I have put somewhat upon these pages. I make no apology for the egotism, if such there is, of this account; it is not designed to be a history, but simply my account of the battle. It should not be assumed, if I have told of some occurrences, that there were not other important ones. I would not have it supposed that I have attempted to do full justice to the good conduct of the fallen, or the survivors, of the First and Twelfth Corps. Others must tell of them. I did not see their work.

A full account of the battle as it was, will never, can never, be made. Who could sketch the changes, the constant shifting of the bloody panorama! It is not possible. The official reports may give results, as to losses, with statements of attacks and repulses; they may also note the means by which results were obtained, which is a statement of the number and kind of the force employed; but the connection between means and results,

the mode, the battle proper, these reports touch lightly. prominent reasons at least exist which go far to account for the general inadequacy of these official reports, or to account for their giving no true idea of what they assume to describe: the literary infirmity of the reporters, and their not seeing themselves and their commands as others would have seen them. And factions, and parties, and politics, the curse of this Republic, are already putting in their unreasonable demands for the foremost honors of this field. "General Hooker won Gettysburg." How? Not with the army in person, or by infinitesimal influence-leaving it almost four days before the battle, when both armies were scattered, and fifty miles apart! Was ever claim so absurd? Hooker, and he alone, won the result at Chancellorsville. "General Howard won Gettysburg." "Sickles saved the day." Just Heaven, save the poor Army of the Potomac from its friends! It has more to dread, and less to hope, from them than from the red bannered hosts of the enemy. The States prefer each her claim for the sole brunt and winning of the fight. "Pennsylvania won it,"-"New York won it." Did not old Greece, or some tribe from the sources of the Nile, win it? For modern Greeksfrom Cork-and African Hannibals were there. Those intermingled graves along the crest, bearing the names of every loval State save one or two, should admonish these geese to cease their cackle. One of the armies of the country won the battle; and that army supposes that General Meade led it upon that occasion. If it be not one of the lessons that this war teaches, that we have a country, paramount, and supreme over faction and party and State, then was the blood of fifty thousand citizens shed on this field in vain. For the reasons mentioned, of this battle, greater than Waterloo, a history, just, comprehensive, complete, will never be written. By and by, out of the chaos of trash and falsehood that the newspapers hold, out of the disjointed mass of reports, out of the traditions and tales that come down from the field, some eve that never saw the battle will select, and some pen will write, what will be named the history. With that the world will be, and if we are alive we must be, content.

Already, as I rode down from the heights, Nature's mys-

terious loom was at work, joining and weaving on her cease-less web the shells had broken there. Another spring shall green these trampled slopes, and flowers planted by unseen hands shall bloom upon these graves; another autumn, and the yellow harvest shall ripen there,—all not in less but higher perfection for this poured-out blood. In another decade of years, in another century, or age, we hope that the Union, by the same means, may repose in a securer peace, and bloom in a higher civilization. Then what matter it, if lame Tradition glean on this field and hand down her garbled sheaf—if deft Story with furtive fingers plait her ballad wreaths, deeds of her heroes here, —or if stately History fill, as she list, her arbitrary tablet, the sounding record of this fight,—Tradition, Story, History, all, will not efface the true, grand Epic of Gettysburg.

HASKELL.

THE MOROCCAN CAVALRY.

By FIRST LIEUTENANT FRED J. HERMAN, NINTH CAVALRY.*

Cavalry, as a separate and recognized corps, does not exist in the regular army of Morocco, although the proportion of mounted warriors in the military service of the sultan is perhaps greater than in any other army in the world.

The regular army of Morocco contains about 25,000 men of whom some 22,500 are infantry and the others field and foot artillery.

Added to this force, however, Morocco may at any time count upon some 100,000 very efficient militia—militia of greater efficiency than the regular army—most of whom are mounted and constitute the picturesque and irregular hordes of warriors who have from time to time rendered such good accounts of themselves.

But the warriors upon whom the sultan relies is the Muchhaznia, the *corps d'élite* of the armed forces of Morocco. This force, numbering some 17,500 mounted men, is composed of the four select Machhsen tribes, the Scherga, Scherarda, Udaja and Bukhari. These are unconditionally pledged to the military service of the government, and generally carry out their compact most faithfully. Those selected are the best warriors of their respective tribes and enjoy, with the other male members not selected, but subject to military service, the right to certain privileges, among them the enjoyment of the lands granted to their ancestors; they receive pay and are exempt from taxation. Many smaller privileges are also granted, as the privilege of falling out from the ranks of their troops when in the neighborhood of

^{*}An extract from a translation of the military study "Morocco," in the "Militar Wochenblatt.'

their homes, to greet friends and acquaintances and relatives, and to rejoin their troops at another point; also to participate in the military tournaments held in their respective villages.

By the aid of these Machhsen tribes, called collectively the Muchhaznia or "Gisch," the sultan upholds his power in the land, and with the aid of these feudal horsemen endeavors to subjugate other tribes who do not stand in the same relation to them. They are subordinate to the government and furnisa armed men voluntarily and are simply military colonies whose members are available for life for military service, and who constitute the national police force of Morocco.

The chief of these collected tribes is commandant of the military colonists. The forces are organized or divided into tribal bodies called "Reha," consisting of 500 men, commanded by a "Kaid el Reha," under whom are five "Kaids el Mia," who command 100 men each, and are in turn supported by eight non-commissioned officers or overseers called Mekkaden. The pasha or governor of each tribe is appointed by the sultan.

As the population of these select tribes is too numerous to include all for military service only a portion thereof is required, and this portion is recruited in a hereditary manner, from the same families. The other tribesmen, thus free from duty, till the soil and constitute the reserve of their respective organizations. Only the Bukhari are all called to service.

The Bukhari are negroes, bought in the south by Sultan Mulei Ismail in the Seventeenth century, and settled in the vicinity of Mekness, and are not considered free. This does not prevent them, however, from promotion to positions of considerable honor. These number about 5,000 men.

These Machhsen tribesmen are considered as a special caste of the population, a caste having a part in the exercise of sovereignty. The name Machhsen refers particularly to the imperial government, although strictly construed it means the entire governing community of the empire, from the simple warrior to the sultan himself.

In addition to the above there are organized two corps of mounted men for special service in the immediate vicinity of the sultan, of which the first, the Meschnari, numbers 500 men, taken from all the Machhsen tribes, is under the command of the Kaid el Meschnar—Meschnar refers to the palace—who has the honors and dignities of palace commandant. These serve principally as orderlies and messengers.

The other corps, that of the Mesakhrin, has a strength of about 3,000 men, similarly organized from selected members of the Machhsen tribes, forms a special imperial guard for the sultan, but must incidentally furnish men for like duties as is required of the Meschnari.

The Mesakhrin enjoy the distinction of being permitted to camp round about the imperial tent, upon the occasion of all marches. They are under the direct orders of the minister of war, to whom is detailed a special kaid from each tribe.

The men of this irregular cavalry wear the customary national dress. It consists of a long kaftan resembling a woman's dress of colored material, and reaching to the ankles, with wide sleeves, over which is drawn the shirt—the barachia—which, like the kaftan, is closed by numerous loops and corresponding knots, but discloses the kaftan, which is of green, moss green, red or blue color, according to the taste of the individual. Over the shirt is drawn the burnus with its cowl-like hanging. The fine quality of the cloths and the usual bright colors of the kaftan causes the clothing to appear rather picturesque and splendid.

The dagger (kumia) is carried on a plaited silken cord over one shoulder, and the saber (sif), often in silver-mounted scabbard like that of the dagger, is thrust through or wound about in voluminous sash, and so guarded from exterior influences, never hangs down, but is carried in a position of constant readiness.

The feet are thrust into leathern slippers, one of which is armed with a long, dagger-like spur. The headdress is the fez. the red pointed cchechia.

The horses, though small, are in general of good endurance. The saddle is large, red in color, with high pommel and cantle. The stirrups are of the long, slipper-like pattern, often of silver, or silver mounted. The bridles have the curb bits only, but these

are of a murderous character.

The Muchhaznia are also armed with rifle or musket, of many patterns and calibre, even to the muzzle loading variety. The imperial guard carries a Mauser carbine of uniform pattern and calibre and of German manufacture.

The uniforms of the imperial guard differ only from those of the Muchhaznia by the added richness of material, uniformity of colors and splendor of embroidery.

THE BRITISH VETERINARY SERVICE COMPARED WITH OUR OWN.

BY COLEMAN NOCKOLDS, VETERINARIAN FIRST CAVALRY.

It was with extreme interest, from an army veterinarian's point of view, that I read the article by Captain W. D. Chitty, of the Fourth Cavalry, entitled "Historical Sketch of the Veterinary Service of the United States Army," in the July, 1909, number of the *Journal* of the U. S. Cavalry Association.

I must take exception to the sentence in which Captain Chitty remarks as follows: "It is only in recent years that the United States Army has been provided with efficient and effective veterinary service." At the same time it must be a matter of great satisfaction to the veterinarians in the service to know that their endeavors to do their duty are looked upon as efficient and effective. There is this to be said, under the circumstances and the great disadvantages of the position in which they are placed, it is extraordinary that they are able to give these impressions.

How much better and effectively they could perform the duties required of them if they were equipped and placed in the same position as their professional confreres in the foreign armies can only be shown by comparison.

Perhaps there are reasons for the fallacious position of the veterinarians who entered the army since 1901; surely not many. The captain mentions that in the examinations for entrance "there is no provision for general educational qualifications." This is to be regretted, and I am sure that the majority of veterinarians in the service today would have it otherwise.

Speaking from personal experience, the entrance examina-

tion to the veterinary school at which I matriculated is as severe, if not more so, as the examinations for entrance to any branch of the army. It requires the applicant to be possessed of an educational degree, the B. A. or its equal, from one of the recognized universities, or to pass the examination given by the college of perceptors. The subjects the applicant is examined in are, besides the ordinary English, including Euclid up to the fifth book, and algebra, to compound equations; also include a thorough knowledge of at least two of the following languages: Latin, French, German, Greek or Italian. Of these, one ancient and one modern language are compulsory. I mention this to prove that it is not the fault of the veterinarian that he had no chance to pass a fair general educational examination.

Having passed three years as a student at the Royal College, London, and was down on the army list all that time, at a period when the status of the British army veterinary surgeon was being changed to what it now is, and again visiting the Army Veterinary Schools at Aldershot and Army Veterinary Corps at various stations during 1906, at the request of the War Department, Washington, D. C., I can give some particulars of the analogy between the British veterinary service and our own.

Up to the year 1792 (the year the Royal College was opened) there were no veterinary surgeons in the British army, and the animals were attended to, when suffering from disease, by the regimental farriers; sometimes the surgeons were requisitioned to give assistance. Because of heavy losses among army horses early in the last century, veterinary surgeons were appointed to cavalry regiment, the Royal artillery and wagon train.

They entered the service with the rank of lieutenant.

Each regiment of cavalry had a veterinary surgeon, but there were but few in the Artillery Corps until the Crimean war, when the number was greatly increased. Veterinary surgeons were appointed, first and second class, the administrative officers being chosen by selection. This was much the same as our veterinary service now is, except that the pay and allowances of the first class veterinarians were those of a major, and second class, those of a captain. In 1878 the regimental system (except in the guards) was abolished, and the Army Veterinary Department constituted. The Veterinary Department, from 1878 until a few years ago, consisted of 128 Veterinary Surgeons, ranking from Veterinary-Lieutenant to Veterinary-Colonel. At the present time the British Army Veterinary Corps is composed of a Director-General, Administrative Veterinary Officers and Executive Veterinary Officers. They are attached to various headquarters, regiments and posts.

RANKS.

(Extracts from pay warrant.) "319. The substantive rank of our Army Veterinary Service shall be as follows: Colonel, Lieutenant Colonel, Major, Captain, Lieutenant.

"320. The undermentioned officers shall rank as follows: As Major General, Director General, Army Veterinary Service.

"A Veterinary Officer is eligible for promotion to brevet rank, under usual conditions."

The rank is combatant, not non-combatant. The Geneva Convention does not recognize the Veterinarian as a non-combatant; neither is he protected by it. It would be rather awkward for the Veterinarian to be taken prisoner by the enemy in time of war and have to explain that he is a civilian, although in uniform.

Probably our Veterinarians would rather have rank of the non-combatant order, but would it not at times be rather at variance with international law?

Candidates for commissions in the British Army Veterinary Corps must make written application to the Secretary, War Office, London; a personal interview with the Director General is necessary and will be arranged by that officer. The minimum age is 21, and the maximum, 27. Candidates must be unmarried and will not be accepted unless in the opinion of the Army Council they are in all respects suitable to hold commission in the army. If approved he will be examined as to his physical fitness by a board of medical officers and if pronounced physically fit will then be eligible for examination. A candidate may be rejected if he shows any deficiency in his general education.

On appointment as Veterinary Officer he is required to undergo a special course of training at the Army Veterinary School at Aldershot. At the end of the course he is examined, and if the examination be satisfactory, and his general report good, he will be retained in the service and appointed a Veterinary officer on probation for a period of six months, at the expiration of which period, if his probationary service has been satisfactory, he shall, on the recommendation of the Director General, and with the approval of the Army Council, receive a commission as lieutenant, and the commission shall be antedated so as to include the period the lieutenant has passed on probation. If his probationary service has not been satisfactory, his services shall be dispensed with and he shall have no further claim on the service.

A lieutenant in the British Army Veterinary Corps is eligible for promotion to captain on completing five years' commissioned service upon passing the required examination. A captain, after ten years of service in that rank, to major. Majors are promoted by selection to the rank of lieutenant colonel, after fifteen years' service as majors, and have had at least three years in India. Colonels are chosen by selection from lieutenant colonels, who have had at least five years' service in that rank.

The office of director general is for a period of three years, and made by selection from the colonels. The officer appointed to this position ranks as major general during tenure of office.

The grades of the enlisted personnel of the Army Veterinary Department are as follows: Farrier quartermaster sergeant, farrier staff sergeant, farrier sergeant, sergeant, corporal, farrier corporal, shoeing smith, private.

Veterinary medicines, instruments and supplies are sent direct to the executive veterinary officers, through the administrative veterinary officers.

Veterinary officers have charge of remount depots, horse transports, and are the horse purchasing officers.

Non-commissioned officers of the Army Veterinary Corps are required to pass through the Army Veterinary School, either as farriers or horseshoers. No man is enlisted for the Army Veterinary Corps, or transferred to it, except he has served at least eight years in a mounted organization.

It is doubtful whether in our service the duties of the veterinarian are carried out in any two regiments or organizations alike. At regimental posts the chance to establish a routine system presents itself, and the immediate efficiency of the regiment as regards animals for duty can always be known. For about a year the commanding officer of the regiment to which I am attached has required the veterinary service to be executed upon the following lines: At a certain hour each day all the farriers report at a specified place with the animals to be prescribed for and examined (except those unable to walk the distance). Each farrier has a sick horse book, in which is entered each day, by name and number, the horses treated, their condition and the treatment prescribed. Each entry is checked daily by the attendant veterinarian. Horses are marked, hospital, quarters, garrison duty, or duty. Those animals suffering from complaints which require more than a few days for treatment are sent to the hospital, which is in charge of a veterinarian, and he renders a weekly report.

The veterinarian in charge of the hospital is allowed one non-commissioned officer, who is detailed for that special duty connected with the veterinary hospital, the detail being for a longer or shorter period as circumstances dictate, also one man as stable orderly, which is a monthly detail. Besides these two attendants, two farriers are required to attend a number of hours daily at the hospital to assist at operations and other duties, as mixing drugs and issuing medicines necessary for use in the troop lines. It is also required that the veterinarian inspect every troop and quartermaster animal at least once weekly.

Of course, this system is a vast improvement on the old method, when the veterinarian was required to attend stables, at stable call, when, more often than not, many cases had to be left to the farriers, because the veterinarian was unable to visit all troop lines during the time stables lasted.

Perhaps the greatest drawback to our veterinary system at present is the matter of inexperienced help that has to be used in a work where experience is so necessary. Even those men that attend the Riley school are unable to make use of experience gained, as far as assisting at the veterinary work at a post goes, as necessarily they are so often promoted, which at once takes them away from the duty for which they were prepared at the service school; often they are specially adapted for this particular duty. Shoeing is perhaps the most important individual duty which the trooper is called upon to perform, yet there is no possibility for improvement in that line, as far as rank goes, while the man stays at it.

A system of promotion, regimental and squadron, would encourage men to take more interest in horseshoeing and farriering; a farrier sergeant and shoeing smith sergeant on the regimental non-commissioned staff, and the same class corporals on the squadron staffs would make valuable instructors to recently made farriers and shoeing smiths, also the proper men for details at veterinary hospitals, quarantine camps and to accompany small details of mounted detachments in the field, etc.

The position of army veterinarian is very unsatisfactory, so much so that at least two good men have resigned in recent years. A commission would regulate things more satisfactorily to all concerned than any other method, but there seems to be some serious objection to this, the reason for which is not very clear. If it is due to an ancient prejudice, carried down from the misty ages, why not drop it, the same as the old shoemaker was? If there are still in existence visible objections, there is always the process of elimination at hand. If the veterinarian is to remain a civilian, and there are reasons to give one the impression that some of them would prefer to do so, it seems only fair that some provision should be made, so that, after years of service and being closely associated with the same regiment and seeing everyone with whom he has become attached socially, promoted away from him, he would not always be last. For instance, there could be a set of quarters at each post at which a veterinarian is necessary set apart as the veterinarian's quarters, so that he, perhaps with his family, would not have to go to the bachelors' quarters, or be doubled up with another veterinarian with a family, to please a newly joined bachelor lieutenant, who prefers the quarters to the bachelor building. In the case of becoming injured or

sick in the line of duty, or dying and leaving a dependent family, it seems as if the veterinarian ought not to be the only man in the army not provided for, especially when one takes into consideration the often dangerous duties connected with his every day work.

The latter day veterinarian has nothing to complain of as far as individual sociability goes; it is as he makes it.

To quote from the article by Captain Chitty: "The present position of veterinarians, their low relative rank, poor pay, utter want of prospects, promotion, pension for long services, injuries or wounds, to which their professional duties render them so liable, is such as to deter respectable, efficient or talented professional men from entering, or, having entered, remaining in the service," is as true today as it was the day it was written.

Perhaps, to repeat what Prof. Schwarzkoph has remarked: "It was well known for a number of years that the majority of veterinarians in the service came either from the ranks of former farriers of the army, or were appointed from civil life, without any qualifications than they themselves professed to possess."

Today this is not the case, and I think I am justified in stating that men of the same caliber as those that have entered the service since 1901 would have been better off, especially from a financial standpoint, if they had gone into civil practice in preference to the army.

It is my opinion that some of those army veterinarians that send articles and communications concerning the service to little, almost local, magazines and reviews, would reach those in the service who have our interest most at heart, by writing once in a while to the CAVALRY JOURNAL.

HISTORY OF THE ARTICLES OF WAR.*

By Captain R. J. BURT, NINTH INFANTRY.

For the American, interest in this subject naturally centers in the rules and articles for the government of the armies of the United States. In seeking for the authority for the same, one naturally turns to our "Constitution of the United States" as the basis of our Federal Government, military as well as civil.

We find there that Congress is invested with certain powers, civil and military, among which is "To make Rules for the Government and Regulation of the land and naval Forces" and "To make all laws which shall be necessary and proper for carrying into Execution the foregoing Powers."

In accordance therewith Congress has enacted a statutory code, viz: "The Rules and Articles of War."

On April 30th, 1789, the present United States 1789. Government began the exercise of its functions as marked out in the Constitution, but it was not until September of that year that Congress passed any legislation providing for the government of our armies. This it then did by simply recognizing what were called "The Articles of War," as they existed under the Articles of Confederation and making them apply to the standing army.

This army had its origin in the bands of patriots who, in 1774 and 1775, prepared, if necessity arose, to resist the usurpations of the Mother country. For their government the colonies naturally accepted for the time being, with some changes and omissions, the Rules and Articles of War in existence in the British Army, with which latter, numbers of colonists had served in the French and Indian Wars. Massachusetts was the

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pioneer and her Provisional Congress adopted "The Massachusetts Articles of War" on April 5th, 1775, even before 1775. Revolutionary hostilities began. On June 30th of that year the Continental Congress likewise adopted Articles from the English and Massachusetts codes which served, with several additions, however, for the government of the Continental armies, and were statutorily recognized, as aforesaid, by Congress acting under the present Constitution.

From this point we look to England and the Continent for further steps in the pursuit of our history. The steps are easily traced in statutory form in Great Britain to the 17th century. From that time authentic records exist showing certain military articles and ordinances were issued, down to the twelfth century, and finally history teaches us that the Romans, and the Greeks before them, formulated certain laws, affecting the conduct of their soldiers, which in subject matter are closely allied to many of our present articles of war. That this is quite probable and natural is obvious since soldiers the world over, and as far as authentic history carries us, have been guilty of committing the same crimes and disorders, and, further, have been subject to much the same kinds of punishments. Among Roman sentences were dishonorable discharge, labor on fortifications, and police duty.

5th In the 5th Century we find the written Salic code, Century. which was, in character, civil as well as military. 9th Successive Frankish Kings revised it up to the 9th Century. Century.

In England there existed a record of an ordinance 1190. of Richard I (Coeur de Lion), of the year 1190, which he issued to his soldiers "about to proceed to Jerusalem." It is concerned with brawling and theft on shipboard.

The French contributed in 1378 their first "ordi-1378. nance" of military law. Again in England appear the "Statutes, Ordinances and Customs" ordained by Rich-1385. ard II, 1385, which may be properly called Articles of War. They consisted of 26 "Items," and, being the first of their kind, are given in brief as follows:

- I. Commanding obedience to the King.
- II. Against "touching the body" of the King.
- III. Against pillaging the church, and crimes against women.
- IV. Against leaving the banner of master or lord.
- V. Against quitting assigned quarters.
- VI. Commanding obedience to one's captain.
- VII. Against robbery and pillage.
- VIII. Against rioting.
 - IX. Against inciting an affray.
 - X. Against crying "Havok." (The signal for pillaging.)
 - XI. Against giving false alarm.
- XII. As to ownership, or keeping, of prisoners, probably for ransom.
- XIII. Against violent disputes over prisoners.
- XIV. Against unauthorized expeditions.
- XV. Against stampeding to witness, or learn of, any affray in the army.
- XVI. One third of all pay, or gains, to go to the lord or master.
- XVII. Against drawing away soldiers from their proper banner to join another.
- XVIII. Commanding arms of St. George to be borne by all soldiers for their identification.
 - XIX. Commanding the proper guarding of one's prisoners and the reporting of the same to one's lord or master.
 - XX. Commanding to keep good watch and not to quit the same without permission.
 - XXI. Against giving safe conduct except by certain officials, and against violating a safe conduct on pain of being beheaded.
- XXII. As to guarding of one's prisoners.

XXIII. Against retaining the "servant" of another.

XXIV. Against unauthorized foraging.

XXV. Against quartering oneself except by assignment of the herbergers.

XXVI. Commanding all names to be handed in for assignment of quarters.

Records exist of similar articles promulgated by Henry V, VII and VIII, 1413 to 1547.

During the reign of Henry VI (1423-61) we 1423-61. find a forerunner of statutory military laws in an act of Parliament covering desertion and giving power to "justice of the peace to inquire and determine in the trial of the crime."—Tytler's Essay on Military Law.

On the Continent in 1538 the Emperor, Charles V, 1538. issued a celebrated penal code, called, in brief, the "Carolina." It was the most important forerunner of existing military codes of continental Europe.

In 1590 appeared the Articles of War of the Free 1590. Netherlands, and in 1621 those of Gustavus Adolphus, 1621. the latter consisting of 167 "Articles and Military Laws."

It appears to have been the most elaborate of all codes up to that time. Traces of it are found in our Articles today. Witness an old translation of the 73d of the articles of Gustavus Adolphus, which is of interest as a probable antecedent of our forty-third:

"73. Whatsoever souldiers shall compell any Governour to give up any Strength shall lose their life for it: those, either Officers or Souldiers, that consent unto it, to be thus punished; the Officers to die all, and the souldiers every tenth man to be hanged; but herein their estate shall be considered, if they already have suffered famine and want of necessaries for their life, and bee withall out of hope to bee relieved, and are so pressed by the enemy, that of necessity they must within a short time give up the Peece, endangering their lives thereby without hope of reliefe: herein shall our Generall, with his Council of Warre, either cleer them, or condemne them according to their merit."

During the great political struggle between Parliament and Charles I in the 17th Century the government of the royal forces formed no small element of discord. Charles, on the return of troops from abroad in 1625, issued a "Com-1625. mission" for their government. The country was at peace and the King's action so aroused Parliament as to call forth the "Petition of Rights" condemning the principles set forth in the commission. This latter delegated certain powers to the Lord Marshal and Sergeant-Major of the Army, with twenty-three other Civil and Military Persons, in substance as follows: 1st, to proceed, according to the Justice of Martial Law, against enlisted Soldiers and other dissolute persons joining themselves with them, and to punish them for robberies, felonies, mutinies, or other outrages or misdemeanors which, by Martial Law, ought to be punished by death; 2d, by summary course, as used in the Armies in time of War, to proceed to trial and condemnation of such offenders, and to put them to death according to the Law Martial for an example of terror to others, and to keep the rest in due awe and obedience: 3d, to erect the Gallows or Gibbets in such places as the Commissioners saw fit, and to execute the offenders in open view as a warning to others to demean themselves as good subjects ought to do.

This instrument assumed the authority to punish without legal trial in violation of the fundamental Laws of the Land.

"The Commission of 1638 (issued on the occasion 1638. of Charles I raising an Army to quell Rebellion in the North of England) was directed to Lord Arundel (as General of the Army to be raised to resist Tumult, Seditions, or Conspiracies against the King or State), and gave him power to command and employ the Army for such Executions, Offenses, or Services as might be ordered under Royal Sign Manual." Two distinct purposes were, however, embraced in this Commission. The first was to execute against all Rebels "Martial Law," for the purpose of suppressing the Rebellion, "as to save whom you shall think good to be saved, and to slay, destroy, and put to execution of death such and so many as you shall think meet by your discretion to be put to death by any

manner of means, to the terror of all other offenders"; and the second was to govern the Army under what may be termed Military Law. Thus, "as well by yourself as by your deputies to hear all criminal causes growing and arising within the Army," and "to make and ordain Ordinances for the good government, rule and order of the Army," with the power of enforcing them by Capital Punishment. All these punishments were absolutely illegal.

In 1639 the already mentioned articles of Gustavus Adolphus were published in London, and in that same year the code of the Earl of Arundel was promulgated, which shows in many parts the marks of having been copied from that of the Swedish King. In this code of the Earl we have a good illustration of articles issued by a subordinate to the King, under the latter's official commission. Among the last to be thus issued were those of the Duke of Northumber-1640. land, 1640, under King Charles during the "Great Civil 1644. War," and of the Earl of Essex, 1644, with the sanction of Parliament. Here appears for the first time the authority of that body affecting the Articles of War.

These last two mentioned codes are very similar and resemble also that of Gustavus Adolphus, which follows as a nataral course of events since English troops had served under the Swedish General in Continental wars

After the restoration, 1660, Parliament, though at 1660. first, at least, loyal to the King, was violently opposed to a standing army. Upon the conclusion of any war the troops were supposed to be disbanded. In ordinary times the defense of the nation rested upon certain fortresses constructed at the mouths of principal rivers and upon the militia. For the protection of the King the Yeomen of the Guard and Gentlemen-at-arms had been recognized since the time of Henry VII and VIII. Charles formed a small army of about nine thousand men and he was compelled to himself maintain it. In his articles of war for their government he assumed authority to extend punishments to the taking of life and limb, though this assumption of power was entirely illegal.

Lord Campbell, speaking of the period, said:

"The plan was formed of ruling by standing army. But, without a Parliament, how was this army to be kept in a proper state of discipline? In time of war, or during a rebellion, troops in the field were subject to martial law, and they might be punished by sentence of a court-martial for mutiny or desertion. But the country was now in a state of peace and profound tranquillity, and the common law, which alone prevailed, knew no distinction between civilian and soldier; so that if a life-guardsman deserted he could only be sued for breach of contract, and if he struck his officer he was only liable to an indictment on an action of battery."

Lord Albemarle's code of 1666 is of interest in that 1666. it provided for general, regimental, and detachment courts. The first was to be appointed by the commander-in-chief and composed of thirteen members. It had jurisdiction over offenses punishable with loss of life or limb. The second was for the trial of minor offenses. The detachment courts had the same powers as regimental courts and were appointed by governors of garrisons.

In 1688 Parliament grasped the affairs of state more 1688. firmly in its own hands than it had ever done before, and with the advent of William and Mary in that year proceeded to participate with vigor in the administration of the army.

In 1689 it became imperative that a code be adopted 1689. which would be effective in time of peace. The circumstances were these:

The Scottish regiment of Dunbarton, formerly commanded by the Duke of Monmouth, being ordered for embarkation to Holland, openly mutinied and declared their adherence to the abdicated Prince. The King communicated this event to Parliament, but, at the same time, marched three regiments of Dutch dragoons against the mutineers. These latter were soon subdued, but no way existed of punishing them except by trial for high treason. Parliament immediately grasped this occasion to assert itself and passed the first Mutiny Act, "for punishing Of-

ficers or Soldiers who shall Mutiny or Desert their Majestye's Service."

The following extract from the Act is interesting as showing Parliament's second great statutory wedge into affairs of the army; the first was one of the conditions upon which William III and Mary took the throne, "That the King could not maintain an army without the consent of Parliament":

"Whereas the raising or keeping a standing army within this kingdom in time of peace unless it be with consent of Parlyament is against Law. And whereas it is judged necessary by their Majestyes and this present Parlyament That dureing this time of Danger severall of the Forces which are now on foote should be continued and others raised for the Safety of the Kingdome for the common defense of the Protestant Religion and for the reduceing of Ireland * * *."

The articles, ten in number, did not take from the King his right to make articles for the army, or to authorize the death penalty for crimes committed abroad. That penalty could be inflicted at home only for the offenses designated. A further distinguishing feature was that the court-martial for the first time became the legal tribunal for the trial of military offenses within the realm in time of peace.

The Act was to be effective only from April 12th to November 10th, 1689. Soon after its expiration, however, it was re-enacted for one year and annually thereafter, with lapses of a few months from time to time, until 1879, when, with the Articles of War, it was consolidated by Parliamentary act.

To return to 1712 and incidentally the Peace of 1712. Urecht; on the conclusion of that peace the prerogative power of the British Sovereign of governing his troops beyond the seas by Articles of War ceased. Parliament therefore gave the Crown statutory power during peace to make such articles and constitute courts-martial in those dominions.

Then came the rebellion of 1715, which resulted, in 1715. one way, in causing statutory power to be conferred upon the Crown, to promulgate Articles of War at home.

1718. The two powers were consolidated in 1718. There had been no limitation to time of peace, of the articles enacted after 1712.

At about this same time the Mutiny Act, in some of its provisions, was extended in its action to dominions abroad.

The British army was then governed under various revised and amplified Mutiny Acts and Articles of War, jointly, up to the outbreak of the American Revolution, when the provisions of those codes were, with some exceptions, embodied in the Articles adopted for our Continental Armies.

The forerunners of these were the Massachusetts 1775. Articles of 1775, already mentioned. This code contained fifty-three articles, of which fifty were, from their phraseology, taken from the British Articles of 1774. Many of them are verbatim copies, others only change the mention of "British forces" to "Massachuseits Army."

The following illustrate the important changes: By the 32d Massachusetts article a general court-martial was to consist of none "under the degree of a Field Officer" and the president swore the witnesses and court. He himself being sworn by the next ranking member. In the British army the court consisted of commissioned officers and the Judge Advocate General administered the oaths.

By the 50th "No Court-Martial shall order any offenders to be whipped or receive more than thirty-nine stripes for any one offense." There was no limit in the British articles.

This change is in line with the greatest difference between the two codes, viz., the amelioration of punishment in the American Articles. Only three of these permitted the death sentence, while that penalty could be exacted under seventeen of the British articles.

By the 51st article court-martial fines were collected by regiment and applied to benefit of the sick.

By the 53d, "All persons called to give evidence in any case before a Court-Martial, who shall refuse to give evidence, shall be punished for such refusal, at the discretion of such Court-Martial. The Oath to be administered in the form fol-

iowing, viz: You swear that the evidence you shall give in the case in hearing shall be the truth, the whole truth, and nothing but the truth, so help you God." Neither of the last two is embodied in any form in the British articles of 1774 or 1765 except in that witnesses "are to be examined upon oath."

The enactment of the Colonial Congress of June 30th, 1775, already mentioned, contains in its first articles the original requirement that the whole should be subscribed to by all officers and soldiers.

The fifty-three that follow are practically exact reproductions of the Massachusetts articles, the phraseology being changed to apply to the Continental Forces instead of the Massachusetts Army. It is evident that in addition, for the construction of this code, the British Articles of 1774 were referred to, since in two or three places the British ideas were more closely followed than in the Massachusetts Articles, courts-martial, for instance, being composed of commissioned officers instead of field officers, or those of higher grade.

Attendance at divine service was recommended instead of required and for the article fifty, prohibiting whipping, was substituted the following: "LI. That no person shall be sentenced by a court-martial to suffer death, except in the cases expressly mentioned in the foregoing articles, nor shall any punishment be inflicted at the discretion of a court-martial, other than degrading, cashiering, drumming out of the army, whipping not exceeding thirty-nine lashes, fine not exceeding two months' pay of the offender, imprisonment not exceeding one month."

The requirements that fines go to the benefit of the sick, and that witnesses refusing to testify be punished by the court were continued.

In addition to these fifty-four, fifteen more articles were added, all of which were taken from the British Articles of 1774.

By the 67th, the pardoning power in general court cases was given to the commander-in-chief, since there was at that time no executive head, and to regimental commanders in regimental court cases.

The death sentence still was restricted to three offenses,

viz: Abandoning any post during an engagement, making known the watch-word, and leaving colors to plunder. This seems to reflect the violent feeling of the times against any evidences of an autocratic standing army springing up from the forces of the United Colonies. Whether or not the people as a whole believed that the Continental soldiers would not be guilty of many offenses, unmentioned, or lightly dealt with, cannot here be stated, but if so, their attitude changed.

On November 7th, 1775, the Continental Congress enacted sixteen additional Articles. By four of these, holding treacherous correspondence with the army, mutiny or sedition, desertion to the enemy, and misbehaving before the enemy or abandoning a post, were put under the death penalty. In three, officers were to be cashiered and drummed out of camp and enlisted men whipped, namely, for drunkenness on guard, sleeping on post, and leaving colors to plunder. This last had previously come under the death penalty.

Three others prescribed punishments for embezzlement, one for cowardice on the part of the officers, one for lying out of quarters on the part of officers as well as enlisted men, and three for irregularities regarding musters. The sixteenth article expressly made punishable, at the discretion of a regimental court-martial, a disobedience against a regimental order, and at the discretion of a general court-martial, disobedience of an order of the commander-in-chief or commanding officer of a detachment or post, if such general court-martial could be had.

It is apparent that this code was entirely inadequate to meet the situations arising in the Continental forces. Congress enacted, September 20th, 1776, quite a complete code. It was an extensive adaptation, word for word in great part, of the British code of 1774. It was divided into sections, covering, as the British articles, divine worship with the subscription to the rules and regulations added, mutiny, enlisting soldiers, musters, returns, desertion, quarrels and sending challenges, suttling, redress of wrongs and abuses toward citizens; crimes punishable by law, redressing wrongs of officers and enlisted men, stores, ammunition, etc., duties in quarters, garrison, or the field, ad-

ministration of justice, effects of the dead, artillery, militia, and miscellaneous articles relating to the foregoing. Sections on quartering and requisitioning of vehicles were omitted.

The code of the previous year was consulted, for some of its features were adopted, viz: That refusal to testify be punishable by the court; that where an officer be cashiered for cowardice or fraud the circumstances be published in neighboring papers and at his home; that the commander-in-chief have the pardoning power; that no person should be sentenced to suffer death except in the cases expressly mentioned in the articles, nor should more than one hundred lashes be inflicted on any offender, and that the fines collected be used in each regiment for the benefit of the sick.

Two ideas are introduced, new to Articles of War, but contained in the British Mutiny Act, viz: Tria! for militiamen by militia officers only, and the preservation of a copy of every general court-martial proceeding and sentence in the office of the Secretary of War, from which the accused should have the right to demand a copy.

The following additional notes on this code may be of interest:

It contained no provision for convening a general courtmartial, though the latter was required to consist of thirteen members. Among other things, it partook of the nature of a court of inquiry. No right to challenge was given. Plea of not guilty for standing mute was not recognized. There was no statute of limitations. No oaths were required from members of inferior courts, or witnesses appearing before them. There were one hundred and two articles; at the present day we have one hundred and twenty-eight.

The nearest article in point of phraseology to any existing today is the one providing that a soldier who enlists without a discharge from his previous organization be reputed a deserter. The article is carried verbatim with the omission of two words, "so offending," to our present fiftieth article. An officer giving protection against creditors to any man under the pretense of his being a soldier was to be cashiered. Soldiers received cer-

tain protection against creditors. Officers having brevets or commissions of a prior date to those of the regiment in which they served to take place in courts-martial and detachments, when composed of different corps, according to the ranks given them in their brevets, or dates of their former commissions; but in their regiments to take rank according to the commissions by which they were mustered in the corps.

Two articles dealt with the artillery, which seems to have been a special organization, making its personnel amenable to the Article of War. The number of distinct offenses involving the death penalty was one less than now. Persuading an officer or soldier to desert was not liable to that extreme punishment at any time,

The revised code was placed before Congress by John Adams. He was met with intense opposition and the act was passed with great difficulty. Congress evidently, without thoroughly considering, looked upon it with suspicion as an encroachment upon liberty.

During the next ten years these articles were not materially modified.

In 1777, besides the commander-in-chief, "conti-1777. nental generals" commanding in either of the American states were given authority to appoint general courtsmartial, and its accompanying pardoning.

The important act of May 31st, 1786, revised sec1786. tion fourteen of the Articles, covering the administration
of justice. Its enactment was mainly for the purpose
of providing courts-martial for small detachments. The provisions of the previous code were modified by the following:
General courts were thereafter to consist of from five to thirteen members and might be ordered "by the general or officer
commanding the troops" in question; similarly the regimental
courts were to consist of three members, and power to try capital cases was forbidden them; for the first time the judge-advocate was required to so far consider himself counsel for the prisoner as to object to any leading question to any of the witnesses,
or any question to the prisoner, the answer to which might tend

to criminate himself; also that depositions of witnesses, not in the line or staff of the army, taken before justices of the peace, might be admitted as evidence.

This fourteenth section constituted the court of inquiry as we know it today. It had, however, existed in the British Army for many years previous.

Resolutions following these articles provided for the immediate reporting of deserters and requiring vigorous effort to be made for their recapture.

At the adoption of the Constitution these, then, 1791. were the Articles of War in existence in the army of the Confederation. They were adopted by the Federal Congress September 29th, 1789, for the then existing army of the United States.

For seven years our military establishment labored under this code, which was necessarily unsuited to the new form of government. A few congressional enactments affecting it became absolutely necessary during the period. For example, the proceedings of courts-martial involving the loss of life, or the dismissal of an officer, were to be referred to the President instead of Congress, this by an act approved May 30th, 1796, which also contained the forerunner of the present 48th Article, namely, that a deserter should be liable to serve for and during such a period as should, with the time that he may have served previous to his desertion, amount to the full term of his enlistment.

This was entirely original. "It was neither borrowed nor adapted from a corresponding provision of the British Mutiny Act."—Davis. Strange to say, by the same act deserters could be tried and sentenced by a regimental or garrison court.

On April 10th, 1806, the President approved the 1806. much needed revision of the Articles of War, which, with comparatively few modifications, stood for sixty-eight years. In this revision there was no division into sections, but the articles, one hundred and two in number, followed the sequence of the code of 1776 and its modifying articles. The wording, as a whole, was adapted to the changed conditions of

government. For example, where formerly court-martial proceedings had been forwarded to Congress, they were now sent to the "Department of War"; where the enlisting soldier took cath to obey the orders of the Continental Congress he now swore to obey those of the President of the United States. Some few former articles were combined and unnecessary words eliminated; as before, the forcing of a safeguard was the only crime to which the unqualified death penalty was attached.

Following the two codes by article we find the following important changes and new items:

Any commanding officer having reason to believe that a challenge has been given to arrest the officers implicated.

Any commanding officer failing to redress wrongs to citizens to be punished as a general court might direct instead of as if he himself had committed the disorders.

In the 33d Article appears "United States" in place of "United American States."

The 34th required the general commanding a State or Territory to take measures to redress wrongs of which officers complained.

For the first time mention is made of the Marine and Engineer Corps, officers of the former taking rank with the army and militia in combined forces. Those of the latter appearing in this paragraph, "The functions of the engineers being generally confined to the most elevated branch of military service, they are not to assume, nor are they subject to be ordered on, any duty beyond the line of their immediate profession, except by the special order of the President of the United States; but they are to receive every mark of respect to which their rank in the army may entitle them, etc." Further on they were placed in the special artillery article and mentioned as amenable to "these Rules and Articles."

The oath put to the judge-advocate was word for word as it is today.

Article seventy provided for the entering of the plea of "not guilty" when a prisoner stood mute to the pleading.

By seventy-one, challenges were permitted. Conduct unbe-

coming an officer and a gentleman was sufficient for his dismissal; no longer was it necessary that such conduct should be scandalous and infamous to warrant that sentence.

Fifty lashes instead of one hundred was the limit that might be given at the discretion of a court, and with this appeared "no officers, non-commissioned officer, soldier, or follower of the army, shall be tried a second time for the same offense."

Every officer authorized to order a general court-martial was now given the pardoning power, except in sentences of death or of cashiering an officer; "which, in the cases where he has authority (by Article 65) to carry them into execution, he might suspend until the pleasure of the President of the United States be known."

The 88th Article here contained the important statute of limitations, heretofore unmentioned in our Articles, though recognized in the British Mutiny Acts in the previous century.

By the one hundredth the President had the power to prescribe the uniform of the army.

Section two of the enactment prescribed that in time of war all persons not citizens of, or owing allegiance to the United States of America, who shall be found lurking as spies shall suffer death.

During the years up to the date of the next revision Congress passed various acts which affected the Articles of War, and, in greater part, were later embodied in them. These are in substance as follows:

1812. The prohibition of corporal punishment by stripes or lashes.

1830. No officer or soldier to be subject to the punishment of death in time of peace.

The appointment of the general court by the President when the department commander be the prosecutor or accuser.

1861. The oath of enlistment and re-enlistment to be administered by any commissioned officer of the army.

Court-martial proceedings before being forwarded for the President's action to be confirmed by the general commanding.

Any officer who, having tendered his resignation, may quit his post or proper duties, without leave, and with intent to remain permanently absent therefrom, prior to due notice of the acceptance of the same, to be deemed and punished as a deserter.

During 1862 military legislation was necessarily 1862. continuous. Acts were passed covering the arrest and prompt trial of officers, and concerning the circumstances under which confinement in a penitentiary might be adjudged.

Article fifty-five was changed to make death the penalty for forcing a safeguard in foreign parts or in the United States during rebellion. The original article coming direct from the British codes made this a crime only if committed in foreign parts. As it stands at present, the provision would not apply in territory of the United States during time of invasion by foreign armies.

During 1863 the following were conspicuous: Of-1863. ficers knowingly making unlawful enlistments of minors, insane persons, deserters and criminals to be court-martialed.

The punishment for certain crimes committed during war, rebellion, etc., to be not less than the punishment provided for the like offense by the laws of the State or Territory in which such offense may have been committed.

Certain offenders to be delivered up to civil magistrates as in our 59th Article. Certain crimes of fraud against the United States made punishable. A reiteration that courts-martial for the trial of militia shall be composed of militia officers only. That courts-martial shall have power to sentence officers who shall absent themselves from their commands without leave, to be reduced to the ranks to serve three years or during the war. Depositions limited to those of witnesses residing beyond the limits of the state in which courts be ordered to sit. Continuances to be granted as now in the 93d Article.

In time of peace no officer to be dismissed except 1866. in pursuance of the sentence of a court-martial, or investigation thereof.

We now come to the most important revision of our ar-

ticles, that contained in the Revised Statutes. The latter were provided for by Act of Congress of June 27th, 1866, in which the President was authorized "to appoint three persons, learned in the law, as commissioners, to revise, simplify, arrange, and consolidate all statutes of the United States, general and permanent in their nature, which shall be in force at the time such commissioners may make the final report of their doings." And, further, "That, in performing this duty, the commissioners shall bring together all statutes and parts of statutes which from similarity of subject ought to be brought together, omitting redundant or obsolete enactments, and making such alterations as may be necessary to reconcile the contradictions, supply the omissions, and amend the imperfections of the original text."

As a result of the labor of this commission we have the Revised Statutes covering all the laws of Congress to include December 1st, 1873. They were approved June 22d, 1874. Section 1342 contains the Articles of War.

Of the changes made, the most important appear in the embodiment of the acts of Congress affecting the army passed since 1806. In many places changes in phraseology have altered the meaning of original articles. In some respects the rearrangement, rather needlessly entered into, seems unfortunate. For instance, the old time-honored article two, now the fifty-second, earnestly recommending all officers and soldiers to attend divine service, having its origin in the uprising of the Christian faith, and originally promulgated by the world's greatest generals from the military era of Gustavus Adolphus on, should never have lost its prominence.

In passing we may well note what General Lieber has authoritatively stated: "The revision of 1874 was made, if I am correctly informed, by commissioners themselves not specially familiar with military law. Had it been possible at this time thoroughly to revise the Articles of War, a work might have been accomplished which the army had for a long time recognized as of great importance. The revision did indeed introduce new features, but they were principally such as upset

well-recognized principles, and placed obstacles in the way of the easy administration of justice."

As our code of today stands practically as that of 1874, it seems unnecessary to follow it further.

In conclusion, I would state that for ready reference a short history of our Articles of War may be found in Winthrop's Military Law.

NOTES ON CHINESE MILITARY ORGANIZATIONS.

BY CAPTAIN JAMES H. REEVES, FOURTEENTH CAVALRY.

These remarks are not intended to be a complete description of the Chinese Army, nor do I desire herein to express personal opinions relative to the same. It is desired only to give some idea of the scheme of organization, especially of the new army, how far that scheme has progressed and some of the principal stations occupied by the resultant army.

Before the Japan-Chinese War of 1894-95 the military forces of China consisted of the Manchu Bannermen and the Provincial troops.

Banner Organizations. The army specially pertaining to the Manchu dynasty was known as the Eight Banners, from the organization introduced by the early sovereigns of the reigning family. The Banners are distinguished by colors as: 1, Bordered Yellow; 2, Plain Yellow; 3, Plain White; 4, Bordered White; 5, Plain Red; 6, Bordered Red; 7, Plain Blue; 8, Bordered Blue.

These were divided into two classes, the first three being for some reason considered superior to the last five.

The nationalities composing the Banner force are three in number, viz., Manchus, Mongols and Chinese, the latter being the descendants of those natives who joined the Manchu invaders during the period of conquest against the Ming dynasty in the early part of the Seventeenth century—the Manchus finally took Peking and seized the throne in 1644.

"As a complete division of each nationality exists under the color of each of the banners enumerated above, there are in fact 24 Banners (or eight Ch'i divided into three Ku-sai each)." The Manchus and Chinese under each Banner consist of five regiments of each nationality, while the Mongols have only two regiments.

Under one or the other of these banners all living Manchus and all descendants of the Mongolian and Chinese soldiery of the conquest are enrolled.

The main force of the Banners is "encamped" in Manchuria and in and around Peking, with offshoots in the various provincial garrisons. A certain number of the adult males of the force received special pay for being members of one or the other of the various military corps into which they have, from time to time, been organized, this in addition to their regular pittance as soldiers of the Banner. This pittance consisted of rations drawn from the tribute rice and amounted to some 2,000,000 piculs (125,000 tons) annually.

There are a general headquarters office of the Banners in Peking, to which one general from each of the Banners was appointed annually to do duty. Generally speaking, all positions and appointments in the Banners were open to all three nationalities alike. To this there was exception in the case of certain special appointments directly under the crown.

From this general Banner organization there were certain paid corps organized. The principal of these were:

- 1. The Guards' Division. This force was organized during the early wars of the Manchu sovereigns. Admission into this corps, which numbered some 3,000 to 4,000 strong, constituted the ambition of the great mass of the Bannermen in Peking.
- 2. The Vanguard Division. This, the leading division in the field, was composed entirely of Manchus or Mongols chosen from the entire Eight Banners at large.
 - 3. The Artillery and Musketry Division.
 - 4. The Light Division.
- 5. There were also certain special smaller organizations, such as The Guides, The Marksmen (for tiger hunting), The Imperial Hunting Department, etc.
- 6. The Peking Field Force. This force, comprising the elite of the Banner force of the capital, was organized in 1862. as a result of the disastrous campaign of 1860 against the British and French troops. It was organized with a view of provid-

ing a special defense force for the Central Government. It numbered 18,000 to 20,000 infantry, cavalry and artillery.

7. The Yuan Ming Yuan Division. This was the resident garrison at the Summer Palace. It was composed of men selected from all the Banners.

All the above mentioned forces or corps were considered as Peking Forces. There was also an elaborate organization for furnishing what was known as the garrisons outside of Peking.

- 1. There were the garrisons of the so-called Military Cordon, consisting of garrisons in twenty-five cities of Chihli Province surrounding Peking.
 - 2. The Garrisons of the Imperial Tombs.
- 3. The Garrisons stationed in the Provinces and Dependencies, as follows: "In the original scheme the garrisons in the provinces made a total of half the garrison in the capital. Of the provincial garrisons about half were in a northern belt, designed partly as an outer defense to the capital, partly to look out on Mongolia; these are at the following places:

Shantung-Tsingchow and Tehchow.

Honan-Kaifeng.

Shansi-Kweihwa, Suiyuan, and Taiyuanfu.

Shensi-Sianfu.

Kansu-Ninghia, Liangchow and Chwangliang.

The garrisons designed primarily to hold down the conquered Chinese were stationed at the following places:

Szechwan—Chengtu.

Hupeh—Kingchow (guarding the outlet of the Yangtze Gorge).

Kiangsu-Nanking, with sub-garrison at Chinkiang.

Chekiang—Hanchow, with sub-garrison at Chapu (once its seaport, now silted up).

Fukien-Foochow.

Kwantung—Canton.

In six provinces there are no garrisons—five of them in the air, strategically, Kiangsi, Hunan, Kweichow, Yunnan and Kwangsi, and the sixth, Anhui, being until Kanghi's time administered as part of Kiangsu.

In each of the eleven provinces thus constituting the Marches of the Manchu Empire is stationed a Warden of the Marches, the Manchu Generalissimo or Field Marshal, commonly called Tartar General, ranking with but before the Viceroy or Civil Governor-General, not generally interfering with the civil government, but, though now innocuous, originally able to impose his will upon his civilian colleague.

Notwithstanding his high rank, he has now no more power or influence in the defense of the Empire than the Warden of the Cinque Ports has in that of England."

These organizations have all deteriorated and may be said to be practically non-existent, having absolutely no military value. The large part of the Bannermen are still pensioners on the bounty of the Throne and for that reason there is a semblance of keeping up the organizations of the Eight Banners, and many Lieutenant Generals are appointed as commanders for the same. For the same reason the Tartar Generalcies are still kept up, but except in one or two cases they have really no functions of importance as officers of the Government.

It is interesting to note that the edict finally abolishing the bow and arrow as the arms of the Banners was issued only on July 21, 1905.

Chinese Army. Besides the Manchu organization mentioned above there was what was known as the Chinese Army, usually called the Army of the Green Standard. This consisted of the Chinese provincial forces. These troops were divided into land and marine forces. The land forces had a total number of from 400,000 to 500,000. They have for a very long time been practically obsolete as field forces, their organization not really fitting them for such service. They discharged the duties of local constabulary and formed the resident garrisons in the various parts of the Empire.

These were superseded on all occasions when active service was required by special organizations of so-called "braves" or irregulars, enlisted and discharged according to circumstances. The organization of these irregular forces dates from the Taiping Rebellion (1850-64), when the regular organization was found

ineffective, and the great provincial rulers, Tseng Kwofan and Li Hungchang, found it necessary to raise these special forces.

These "braves" were organized into the so-called "camps," corresponding to battalions, and grouped into higher units as occasion demanded. These higher units were called districts, and there was no regular brigade or division formations.

For the Army of the Green Standard, there is in each province an officer or Commander-in-Chief, called T'i-tu. Under him there were territorial organizations of brigades and regiments and "camps."

The titleTung-ling was used for the commander of a military district, whatever his rank, which might be from that of Commander-in-Chief to that of Colonel.

Ying-kuan is the title of an officer commanding a sub-district, and ranks from Major to Second Captain.

The title Ying-tsun was used for officers in command of special bodies of troops, such as the "braves" when organized, or certain special Manchu contingents.

Wu-wei-chun. After the disasters of the Japanese War of 1894-95, a new army or force called the Wu-wei-chun was organized. It was independent of the provincial armies and was the first attempt at a national army for the defense of the Throne. This was not confined to the Banner organizations nor to the provinces, but was to be national. This force was divided into five divisions, each nominally 10,000 strong. The Generalissimo, or Commander-in-Chief, was Yung-lu (Jung-lu), a Grand Councillor, Viceroy of Chihli Province in 1898, and a name quite familiar in 1900 in connection with Boxerism.

The "Rear" or fifth division was composed of Mohammedans and were the principal troops attacking the legations in 1900.

The "Front" Division, under General Nieh, joined the Boxers at Tientsin in 1900. General Nieh was killed and after the capture of the native city, July 13th, the division was scattered and ceased to exist. Part of the Left Division also took part in the operations. The Center and Rear Divisions also took part in the attack on the legations. After the collapse of Boxer-

ism these divisions were also scattered and ceased to exist, except a part of the Rear Division, which accompanied Tung Fusiang to his home in Kansu, and this was finally disbanded on his death a year or so ago.

The Right Division, originally commanded by Yuan Shihkai, was with him at Chi-nan-fu, the capital of Shantung Province, in 1900, and was instrumental in keeping that province quiet. He was Governor of the Province at that time.

In 1901, when Yuan was appointed Viceroy of Chihli Province, he brought his division to Peking. It formed the nucleus of the Lu-chun and is now merged in the 5th and 6th Divisions of that force.

The Left Division is therefore the only one remaining. It protected the Empress Dowager in her flight to Sian-fu, in Shensi Province, in 1900. When General Sung died in 1904 he was succeeded by General Mu Yukun, who was also Commander-in-Chief of Chihli Province.

Lu-chun. This brings us down to the time of the formation of the Lu-Chun, or generally called the new army. Probably the best name to give it is the National Army, for the object is to form a single army, gradually absorbing all the other forces. It is to be divided among all the Provinces, but directed and controlled by the War Board in Peking. This movement was commenced by H. E. Yuan Shihkai, Vicerov of Chihli, in 1904. Acting under the Imperial authority, from 1904 to 1906 he practically completed the organization of six divisions in Chihli Province. The movement had also begun in some of the other provinces, especially Hupeh and Kiang-su. About the end of 1906 the new War Board, or Lu-chun Pu, was organized and the command of four of the six divisions was transferred to this Board, leaving only two divisions under the control of the Viceroy of Chihli Province. This organization has been continued and spread until there are now more or less new troops in all the provinces.

Hsun-fang-tui. Since the formation of the Lu-chun the provincial troops have been reorganized and are now called Hsunfang-tui, or, as we would properly call them, constabulary.

They are under the control of the provincial officials and are used for the enforcing of the civil laws of the country.

In addition to these, each town of any size has its own police, the duties of which are similar to that of police in other countries.

Surveillance Troops. There may also be mentioned a special force maintained on the Yangtze River and called the Surveillance Troops, or river police. This is a general police force that belongs to no province and is specially charged with the suppression of the salt smugglers.

Having briefly noted the different kinds of troops that China maintains, we will take up briefly the organization of each kind. As the Bannermen and the Army of the Green Standard have to all intents and purposes ceased to exist, it leaves for our consideration only the Wu-wei-chun, or so-called special defense army of the Throne, the Lu-chun or national army and the Hsunfang-tui or constabulary.

Wu-wei-tso-chun (that is the Left Division of the Wu-wei-chun), better known to foreigners in recent years as the Army of General Ma Yukun, consists of twenty battalions of infantry, two battalions of artillery and two squadrons of cavalry. These are divided into five "lu" or districts, the first four containing each five battalions of infantry and the fifth containing two battalions of artillery and two squadrons. There is also the General's bodyguard, which consists of 100 mounted men. The districts are called right, left, center, front and rear.

Infantry Battalion. This consists of five companies (called shao), which are also named right, left, center, front and rear. Four of these companies have nine squads each, while the center one has only six squads; each squad has eleven men. This gives a total of 458 to a battalion; there are also 42 coolies to each battalion. Each battalion has a commanding officer and also a drill instructor who really commands the battalion on parade; each company has a captain and one subaltern; this gives a total of twelve officers to a battalion.

Cavalry Squadron. The cavalry is said to be divided into two parts, the regular and irregular. The regular receive ordinary pay and are given horses. The irregular are given additional pay, in all eight taels per month, and must furnish and feed their own horses. The keep of a horse costs from three to four taels per month, while the horse costs from forty to sixty taels. If the horse dies they are free to go; that is, return to their homes, or else wait in some nearby village till they have managed to get another horse, when they can return to work. The irregular part of this cavalry is said to be organized into five companies of 100 men each. The regular part is now, I believe, disbanded.

Artillery Battalion. Each battalion consists of about 250 men and twelve officers, with a number of coolies, horse attendants, etc., and about 250 horses. To the two battalions they claim to have 42 guns of various caliber and type.

There are thirteen field guns of 57 mm. caliber; eight quick firing 57 mm. caliber, and twenty-one mountain guns from 37 to 57 mm. caliber.

The strength of the force and stations are as follows:

Infantry—Fifteen battalions at T'ung-chow (15 miles east of Peking); two battalions at Ku-pei-kou (80 miles northeast of Peking); one battalion at Shih-hsia (60 miles north of Peking); one battalion at Mi-yun-hsien (45 miles northeast of Peking).

Artillery—Two battalions at T'ung-chow.

Cavalry—Five companies of irregular along the road from Peking to Ku-pei-kou.

General's bodyguard at T'ung-chow, the headquarters of the force.

Recapitulation:

recupitation.				
Infantry				
Cavalry				
Artillery 500				
Bodyguard	7,594			
To which add about 1,000 coolies	1,000			
Total number of men in force				

The men composing this force are principally from Honan and Anhui Provinces, though there are a few from Shantung and Chihli Provinces. They serve from about 20 to 40 years of age; the average at present seems to be about 28. They appear

contented and well fed. They receive rice and vegetables daily and meat on the first and fifteenth of each month.

Their pay is 3.3 taels per month, with free food.

They have the *usual punishments*; that is, beating with the bamboo for the ordinary offenses and more barbarous for grave offenses.

Uniforms given them annually are three in number, one unlined, one lined and one wadded. The first two are of dark blue with an overjacket of black bordered with red. The wadded is black and is worn with a yellow sash around the waist.

Every two years they are given a sheepskin lined overcoat.

They wear turbans and long Chinese cloth boots, which they buy themselves.

Arms are partly Mauser and partly Manulicher rifles. The cavalry have Mauser or Manulicher carbines.

They *drill* twice a day, two hours each time. The drill is a mixture of modern and old-time Chinese movements.

This force may be classed as a body of irregular troops, modern armed and partially modern drilled, without having a modern organization. They are not of equal value to the Lu-chun troops and probably are not equal to the best of the Hsun-fang-tui.

A recent notice in the newspapers states that the present General Chang-kwei-ti, who succeeded General Ma-yu-kun on the latter's death about six months ago, is in consultation with the War Board as to the advisability of converting this force into regular Lu-chun troops. It is proposed to form a division, establish a school and hospital.

Lu-chun. Before taking up directly the organization of the Lu-chun it will be interesting to note certain features of the organization act or regulations of the Lu-chun.

"Classes of Troops. The army shall be divided into three classes of troops as follows:

1st. The regulars, to be composed of bona fide natives (of the place where enrolled) having family connections. These are to be assembled and drilled, shall receive full pay, and at the expiration of three years shall leave the ranks and return to the place of their original registry.

2d. The reserves, to be composed of the regulars who have served their three years and been retired from the ranks. They shall be drilled at stated periods, shall receive a decreased salary, and at the end of three more years shall be retired.

3d. The second reserve, to be composed of the reserves who have served their terms as such and been retired. These shall also be drilled at stated periods, shall receive a still further reduced pay, and at the end of four years shall be retired as private citizens,"

For mobilization it is provided that when sent on service the men and weapons of each division may be increased as follows: To each section of infantry may be added three squads, the men to be drawn from the reserves and the chiefs of squads from the regular forces. The number of fighting men in the artillery shall not be increased, but six guns may be added to each battery. The additional men necessary for the transport of ammunition and so forth shall also be brought from the reserves, and if these are insufficient the second reserves may be drawn upon. As for the cavalry and engineering corps, their training is a somewhat more difficult matter, and it is fitting that they should always be in readiness, so that it may not be necessary to add to their numbers in time of war. As for the baggage corps, men may be added according to the distances to be traversed and the difficulties of the road. They should be drawn from the reserves and the second reserves, and if the number of these is insufficient, transport coolies may be engaged.

The Reserves—How Formed. After three years' drill and instruction the regular troops shall be given a certificate and shall be assisted to return to their native villages, where they shall be registered as reserves, receiving each month a pay of one tael. Each year in the tenth moon the General commanding the forces of the province shall select and send an officer to each prefecture and department to conduct the drill. One month shall be taken as the standard, and during this month the men shall receive the same pay as the regulars. Three years after the return of the regulars to their native villages another certificate shall be given them classifying them as second reserves. They shall receive

half of the pay of the reserves. In the second and fourth years of their service as second reserves they shall be brought together for drill according to the regulations for the drill of the reserves. In the first and third years they shall be exempt from drill. At the end of the fourth year they shall be retired as private citizens.

Their pay shall cease and they shall not be liable to be called out, and a final certificate shall be given them.

If afterwards hostilities should break out, those under the age of 45 who may wish to enlist may present their certificates and be placed on the payrolls.

Enlistments. The date of enlistment having been fixed upon for any given district, and the place of examination decided upon, proclamations should be issued beforehand setting forth the rules of enlistment. On the date appointed an officer shall be deputed to act in concert with the prefect or intendent of the department and direct the district magistrates to select and make the levy according to the pattern (rules) set forth. These rules shall be as follows:

1st. The age limit—this shall be between the ages of 20 and 25.

2d. Physical requirements. The height must be four feet and eight inches or over, by the tailor's measure. The stature of the people of the south being on the average somewhat less than in the north, in those districts two inches may be deducted from the requirement. Those who have any of the five senses impaired, those of general physical disability, and those who have diseases of the eyes or internal diseases shall not be accepted.

3rd. Strength. Each man shall be required to lift 100 chin or upwards. (One chin equals 1 1/3 pounds.)

4th. Origin. The applicants must be indigenous and with family connections, and at the time of their enlistment should make a statement of the members of their family for three generations, their place of residence and the number of their "sieve and ladle marks." (These are the marks on the ends of the fingers and are much used by the Chinese in identifications.)

5th. Character. Opium smokers and those who do not

habitually attend to their duties or who have been before the courts for violations of the laws shall not be accepted.

Those who are up to the mark shall be entered upon the lists, of which a copy shall be made and turned over to the local authorities for record. The aforesaid deputy shall issue daily rations according to the record (register). When the time comes for the men to be detailed for duty extra allowance shall be made sufficient to cover their necessary expenses.

Moreover, a written certificate shall be given to the family of each of the enlisted men, to which shall be affixed the seal of the bureau of military preparations. At the end of three months after their organization, when the soldiers have been divided into classes, to be paid according to their rank as chief of squad or private, the pay office shall appoint a deputy to take charge of a certain amount, which shall be deducted every six months from the pay of the men. These deputies shall, in concert with the local authorities of the place, issue a proclamation and fix a date, ordering the representative of each family to appear with the certificate and receive in person the amounts due. It is further provided for replacing certificate, if lost, for the family writing to the soldier in case the deputy does not pay them, etc., etc. There are also certain special privileges granted to the family of the enlisted men, such as: certain exemptions from land taxes; local magistrates are enjoined to have special care and watch over them to see that they are not oppressed and cheated; if members of the family become implicated in a lawsuit they may be granted the privilege, accorded a student of the Imperial Academy, of sending a representative to present a petition, etc., etc.

Forming the Ranks. Whenever new troops are levied there should first be enlisted, to the number of one-fifth of the entire battalion, young men with some knowledge of the written character, and these should receive the pay of first-class privates. After these have been drilled according to the regulations for a period of five months, some shall be selected and promoted to be assistant chiefs of squads, and the remainder shall continue to serve as first-class privates. When according to the registry

of the entire battalion the number shall be filled up, the men shall be divided into squads and arranged in files, and the aforesaid assistant chiefs of squads and first-class privates shall be charged with the responsibility of the drill. After three months more the assistant chiefs of squads shall be promoted, if found worthy, to be chiefs of squads, and the first-class privates shall be selected to fill the places of assistants thus left vacant. All the new soldiers entering the ranks (after the first enlistment of one-fifth) shall be registered as second-class privates, and at the end of five months selections may be made from them to become first-class privates. As they gradually become accustomed to the drill those who manifest extraordinary ability shall be made chiefs of squads. At the beginning, when the files are being made up, there are differences in the time of entry, therefore there are distinctions in grade to be made. But at the expiration of ten months, when the register shall be filled up according to the new regulations, at the proper time the commanding officers shall examine into the relative merits and demerits, diligence or remissness of the men, and shall promote or degrade accordingly. Thus the privates will be brought in time to try to excel each other and to present the finest possible appearance.

The power of promotion from second-class to first-class private may rest with the company commander, but that of promotion from first-class privates to assistants and chiefs of squads should rest with the commanding officer.

Instruction and Drill. In the government of troops the first thing to be considered is instruction, and the second is drill; the instruction is for the purpose of developing the intelligence of the soldiers and strengthening their character. The drill is for the purpose of refining their skill and increasing their ability and strength. * * * It is to be feared that all officers will not be able to combine the duties of instruction and drill. Therefore, in every regiment there shall be established temporarily a drill officer, who, under the general direction of the commanding officer, shall transmit to the junior officers instruction in drill and discipline and the movement and direction of troops.

Inspections are provided for, every three years by an Imperi-

ally appointed inspector; every year by the Viceroy or Governor; very frequently by the division or corps commander.

Rewards and Encouragements. In the organization of new forces the matters to be provided for are numerous and difficult. But after the regulations have been brought to completion and instruction and drill have been gradually imparted, until the soldiers may be classified as fighting men, the Tartar Generals, Vicerovs and Governors may petition the Throne for the appointment of a high official, who, according to the detailed regulations for inspections, shall make a zealous examination of the forces. If the instruction and drill have not been thorough the time shall be extended for further drill. If the troops be found up to the mark in all respects, showing the results of careful training. then in consideration of extraordinary merit a request for reward may be presented. The limit of the number to be brought forward for reward shall be 2 in every 100 to be presented to the Throne, and 3 in every 100 to the provincial authorities. The posts held by those thus presented shall be entered on the register by the Military Commission and the Board of War, and when vacancies occur in the posts above them they shall be given the preference in making the appointments. Afterwards, these recommendations shall be made, within the same limits, at the regular triennial inspections. But this provision (that is for the above rewards) is to apply only to the initial periods of the new organizations.

Punishments are provided for grave offenses according to military law; for minor offenses and neglects of duty they are to be administered by the commanding officers, by deductions of pay, by being placarded in the camp, by having the offenses entered up and punishment increased according to the number of times the offense has been committed, etc.

In case of desertion provisions are made for punishment of the offense, also for hunting out the deserter. In this case the family, the native village and the local magistrate of the deserter are all to be punished, especially if the deserter returns to the place of enlistment. In the latter case it is made incumbent upon all to at once seize him and report his presence to the authorities. A system of pensions is to be provided for. Those who die in battle (their families) are placed first; then those who are badly wounded in battle; then those who die in the public service; lastly those who have worn out by long service.

In making payments it is provided that the pay officer shall weigh out the packages of silver, and then an officer shall determine by drawing lots the order in which the battalions shall be paid. The pay officer then goes to the drill ground and the battalion being paraded, he again weighs out and examines the packages of silver.

The battalion officer who receives them shall write in the receipt distinctly the words "not the slightest shortage."

The pay officer is charged with inquiring carefully into the cases of absences on account of sickness or for other cause. The Lattalion officer is charged with making accusation in case of any shortage of funds. Thus it is sought to establish checks and guards against frauds.

Uniforms for winter shall be of black color and for summer dust colored. Officers shall buy their own, but the soldier's shall be furnished by the government.

Special rules are laid down for saluting the flag, for the ceremony of presenting the colors, etc.

Adaptations. These newly adopted regulations are intended to be put in practice in every province. But conditions differ somewhat in different provinces, and it is consequently necessary to provide for certain alterations and adaptations. For example: If in the certain province there be much level and dry land, then the artillery may be increased, large carts may be used in transportation, and additions may be made to the cavalry force, for instance two regiments or an entire brigade to a division. In a mountainous province mountain guns may be used, and packhorses employed in transportation as well as coolies and wheelbarrows. In marshy country (many canals) it may be advantageous to make use of boats, or to have burdens carried on the backs of men. In the transportation of mountain guns pack horses may be used, and where the horses cannot go use may be made of the men.

As for provisions for the men, provender for the horses, clothing, shoes and all necessary articles for use, these should be purchased according as prices are high or low in the different listricts, care being taken that they are sufficient for use and that the quality is good.

Organization of the Lu-chun. Though the regulations provide for the formation of army corps when necessary, the highest unit so far formed is the division. A division in the Chinese Army consists of: Two brigades of infantry, one regiment of cavalry, one regiment of artillery, one battalion of engineers, one battalion of transport, one company of the sanitary corps (hospital), and in some divisions one balloon section and one machine gun section.

A brigade of infantry consists of two regiments of infantry each to three battalions of four companies; each company is divided into three sections of three squads each; each squad consists of 14 men; viz: one sergeant (squad leader), one corporal (assistant squad leader), four first-class and eight second class privates. The sergeants are called chiefs of squads and the corporals assistant chiefs of squads.

We therefore have the squad of 14 rifles, the section of 42 rifles, the company of 126 rifles, the battalion of 504 rifles, the regiment of 1512 rifles, the brigade of 3024 rifles, the division of 6048 rifles.

Each company has one captain and three lieutenants. Each battalion has one commanding officer, one drill instructor, one quartermaster, one surgeon, and one assistant surgeon. There are also writers, clerks, signal men, orderlies, nurses, artificers, gunsmiths, cooks, coolies, drivers and 36 supernumeraries (these being soldiers ready at the barracks to take the place of men sick, on leave, etc.). All the above mentioned must be added to the strength of the battalion of infantry, and that brings its strength up to, for the total of men, 659; the regiment will be 659 times 3 plus 27, 2004; the brigade will be 2004 times 3 plus 28, 4036; the numbers 27 and 28 added to the strength of the regiment and brigade represent the number of men in the headquarters of those organizations.

A regiment of cavalry consists of three squadrons of four troops or companies each; each company is divided into two platoons of two squads of 14 men each.

We therefore have the squad of 14 sabers, the platoon of 28 sabers, the company (troop) of 56 sabers, the squadron of 224 sabers, and the regiment of 672 sabers.

To the strength of the squadron there must be added the extra men, as in the case of the infantry battalion, including 16 supernumeraries and 32 mafus or grooms, which gives us for the total of the squadron 363 men.

The regiment will be 363 times 3 plus 27 (headquarters men), equals 1116 men.

A regiment of artillery is composed of three battalions of three batteries each of six guns. Each battery is divided into three sections, each of three squads of 14 men. We therefore bave the squad of 14 men (fighting), the section of 42 men, the battery of 126 men, the battalion of 378 men.

To this add the extra men as for an infantry battalion, including 27 supernumeraries, 31 servants. 6 stablemen and 42 mafus (grooms), and the total is 568. The regiment would be 568 times 3 plus 27 (headquarters men), equal 1731 men.

The engineer battalion is divided the same as the infantry; that is, four companies of three sections of three squads of 14 men each. We have the squad of 14 rifles, the section of 42 rifles, the company of 126 rifles, the battalion of 504 rifles. In the engineers the total of extra men to be added is 167; this includes 36 supernumeraries and 40 servants, and gives for the total of the battalion 671 men.

The transport battalion has practically the same organization as the engineer battalion; the total is 748 men. In the transport battalion there are 72 baggage carts, 266 mules and 101 riding animals.

The sanitary company. The organization of this service seems to be at present more or less experimental. It is apparently gradually expanding into what might be called a sanitary battalion. In one division (during the maneuvers last fall) there was seen a company of 97 men, while another division had a

company of 257 men, divided into two distinct parts. One-half had supervision of the hospital, care of wounded, etc., while the other half was charged with the overseeing and assisting in the sanitation of the camps, including the cleaning of the picket lines. Just how much of this sanitary policing is actually done by the men of the sanitary company, and how much done by the men of the camp under the supervision of the sanitary men, I have not been able to determine.

Balloon section. There are several of the divisions supplied with a balloon and section of fifty men for handling the same and its appliances. It is not believed that all the divisions are to be so equipped. It is probably the intention to have a balloon with each division or corps called upon to act independently. At all the maneuvers they now give each side one balloon and allow one for the umpires directing the maneuvers.

Machine gun section. Each division is to have a machine gun company or section. This is also in the experimental stage. In the maneuvers last fall one division had a detachment of 120 men, while the other had 132 men. Each detachment had 12 machine guns. One side had 12 Rexers, while the other side had 8 Maxims and 4 Japanese.

Summing up the above organizations, it gives us for the total men of a division: Infantry, 8072; cavalry, 1116; artillery, 1731; engineers, 671; transport, 748; sanitary, 257; balloon section, 50; machine gun section, 130; total, 12,735, or in round numbers 12,500 men for a division. This is the number given as the strength of a division in the organization act of the army. Since the act was issued there have been some changes in the sanitary company, and also the addition of the balloon and machine gun detachments, giving the above difference in figures.

There are eight divisions and twenty separate brigades organized, the divisions being stationed one in each of the provinces of Manchuria, Shantung, Hupeh, Kiangsu, and four in Chihli, the separate brigades being scattered throughout the other provinces.

The strength of the above would be about 180,000 men; that is 8 divisions at 12,500 men each, and 20 brigades of infan-

try at 4036 each. Allowing for organizations not being up to strength, and for the fact that the organization has not been completed in all of them, a fair estimate of the available strength would be 150,000 men. Those brigades not definitely numbered have not as yet had the Imperial inspection and been definitely received into the Lu-chun.

The majority of the troops in each province are stationed at or near the capital of the province.

In November, 1907, Imperial authority was given for expanding the Lu-chun to 36 divisions.

Plans have very recently (during the last four months) been made for a further expansion to 45 divisions, but that will be very far in the future. A total of five years was allowed for the complete organization of the 36 mentioned above; due to lack of money, this organization will not be completed within the time specified.

Organizations—how numbered. As noticed above, the divisions are numbered serially as 1st, 2nd, 3rd, etc. The same order has been followed in numbering brigades, regiments, engineer battalions, etc. The grouping together in higher units has been perfectly logically followed out—the simplest way possible.

The first and second brigades form the first division.

The first and second regiments of infantry form the first brigade of infantry, etc. This gives us the first four regiments of infantry to the first division,

The regiments of cavalry, artillery, battalions of engineers, etc., have the same number as the division to which they are assigned. The first division therefore is composed of the first and second brigades of infantry, the first regiment of cavalry, the first regiment of artillery, the first battalion of engineers, the first battalion of transport, etc., etc.

Distinguishing colors. The different branches of the service are distinguished by colors, usually worn on the shoulder strap and cap band.

For infantry the color is red; cavalry, white; artillery, yellow; engineers, blue; transport, crimson; sanitary, green.

Sergeants, corporals, first and second-class privates are in-

dicated by marks or chevrons on the upper part of the right arm, the chevron being the color of the arm of the service. There are three marks or strips for a sergeant, two for a corporal, one for a first-class private, and none for a second-class private.

Officers are divided into three classes or grades, general officers, field officers and company officers. These classes or grades are distinguished in three ways:

- 1. General officers have a small red button on the front part of the forage cap, field officers a blue button and company officers a white button.
- 2. General officers have three stripes around the cap, these stripes being in the cap band and of the color of the service to which the officer belongs; field officers have two stripes, and company officers one stripe.
- 3. General officers have three buttons (in horizontal line) on the wrist of the blouse or coat; field officers have two and company officers one. These buttons are of brass,

Rank in each grade is distinguished by the number of stripes on the wrist of the coat or blouse. Lieutenant General has three, Major General two and Brigadier General one. A Colonel has three, a Lieutenant Colonel two and a Major one. A Captain has three, First Lieutenant two and Second Lieutenant one.

On the service uniform the stripe is black. On the dress uniform it is also black. On the full dress uniform it is either silver or gold. On the full dress uniform the buttons on the wrist are replaced by a narrow cord or braid laid on in the form of an Austrian knot.

Examples: An officer with three buttons on his wrist and three stripes would be a Lieutenant General; if he has two buttons and three stripes he is a Colonel; if he has one button and three stripes he is a Captain.

Officers of the General Staff have on the lower part of the sleeve of the coat, but above the other insignia, three inter-twined circles of gold, silver and red braid.

Pay. The pay of the Lu-chun is very good, and, relative to that received by the laboring classes of the country, compares most favorably with the pay of armies in foreign countries.

All pay and allowances are given, in the following table, in taels per month, the tael at present being worth about 65 cents gold, in United States currency:

Commander of an Army Corps, pay 600; allowances, 1,000.

Commander of a Division, pay 400; allowances 600.

Commander of a Brigade, pay 250; allowances 250.

Commander of a Regiment, pay 200; allowances 200.

Commander of a Battalion, pay 100; allowances 140.

Commander of a Company, pay 60; allowances 20.

Aides-de-Camp to Division Commander, pay 100; allowances 100.

Aides-de-Camp to Brigade Commanders, pay 80; allowances, 80.

First-class Scribes, pay 60.

Second-class Scribes, pay 40.

Third-class Scribes, pay 30.

When a Brigade is stationed alone the commander's allowances are increased by 200 taels per month. When a Regiment is stationed alone the commander's allowances are increased by 100 taels per month.

"From the salary of officers no deductions will be made, but they may be made from the pay of privates, artisans," etc., etc. Deductions from soldiers' pay sent to their families is one tael per month. The deduction made on account of food varies from \$1.50 to \$3.00 (Mexican) per month (from 1 to 1½ taels), depending upon the section of the Empire in which they happen to be stationed.

Pay	οř	Quartermaster Sergeant
* *	**	Ordnance Serveant 30
	**	Vetermarian 30
	**	Signal Sergeant
		Clerks (three grades). 24 16 12
	* *	Chief of Squad.
**	* *	Assistant Chief of Squad 4.8
		First-class Private
5.5	14	Second-class Private. 4.2
66	12	Chief Artificer 9.0
66	44	Orderlies (headquarters) mounted
66	4.6	Special Guards. 4.5

66	4.6	Signalmen	4.5
		Musicians (three classes)	
		Gunsmiths and Blacksmiths	
		Drivers, Farriers, Carpenters	
		Servants, Cooks, Mafus	

"In the expense incurred by the soldiers there is a difference between movement and inaction. When foreign countries are preparing for war their allowances are usually doubled. The pay received by Chinese soldiers is not great to begin with, and at present the price of silver is low and that of commodities unusually high. Outside the cost of food and the allowances made to his family, together with the shoes, stockings, bands, etc., supplied by himself, there is but little necessary expenditure, and the soldier's pay is, in time of peace, sufficient. But when the troops are transported to some other place in preparation for war a greater number of shoes and stockings are required and the cost of food is considerably increased. It is not expedient to provide insufficiently for those who are devoting their lives to the service of the country. For the present let it be fixed that when on active service the Chiefs of Squads and Privates shall receive an additional pay of one tael per month, to be suspended when they are once more at a permanent station."

Pay of Chinese workmen of various grades. On Government works, public buildings, etc., now being carried on in Peking, the following rates and rules pertain:

"Chinese workmen are paid by the day and feed themselves. They start work about half an hour after daylight and stop as it begins to get dark; but with the many allowed rests during the day they do not work over eight hours per day, excepting in an emergency." It is needless to add that when they do work there is no rush, for they are the most deliberate of mortals.

Daily Wages:

Carpenters	cents	Mexican
Bricklayers) • • •	66
Plasterers		66
Paperers		66
Stone Cutters		66
Foremen		66

Ordinary Coolies	ents M	lexican
Boys (helpers)	44	**
Wood Sawyers	6.6	6.6
Teamsters		44
Blacksmiths, first-class		**
Blacksmiths, second-class 60	**	66

For other classes the following wages are paid per month:

Policemen	 .\$6.50	to	\$9.00	Mexican
Water carriers				**
Cart drivers	 . 6.50	to	8.50	66
Ricksha coolies	 . 7.00	to	8.00	**
Night watchmen	 . 6.00	to	7.00	4.4
Gatekeeper, doorkeeper	 . 7.00	to	8.00	**
Coolies (collectively)	 . 5.50	to	8.00	**
Farm hands				44

(But in this case the owner of the farm must feed the hands.)

These prices prevail in and around Peking, where expenses of living are high and wages are fixed accordingly. In the country towns, from which most of the soldiers are drawn, wages are from $\frac{1}{4}$ to $\frac{1}{2}$ less than the above, depending upon the section of the Empire and the distance from coast ports.

The uniform adopted for the Lu-chun has been modeled after the uniform of foreign armies. There are furnished each soldier annually one or two khaki unlined and one lined; one or two blue lined and one wadded, and perhaps in the north one fur lined. The blue of the men is a very dark blue, while that of the officers is somewhat lighter (in color), and allows an officer and private to be distinguished at considerable distance.

The forage cap has a sort of bell-shaped flaring crown with a glazed visor, and bands or stripes of color of the arm of the service.

Shoes are usually russet leather. The pattern so far used is not very satisfactory. It is a rather low-cut shoe, with a sort of cloth stocking top that wraps close around the ankle under the puttee or legging. They have also the Chinese cloth shoe or boot. A soldier receives one pair of leather and two of cloth annually.

Leggings of canvas or a bandage puttee of cotton, though

I have seen a few woolen ones, are furnished. The canvas legging is very light and wrinkles easily. The officers much affect very high russet leather boots for service and patent leather for dress wear.

Overcoat for both officers and men is of dark blue cloth. The badges of rank are put on the sleeve of the overcoat also. There has recently been adopted at Wuchang a handsome khakt woolen overcoat, which will prboably become general in the Army.

Equipment. Canvas or leather pack of Japanese model, canvas haversack, water bottle, Japanese pattern mess tin, leather waist belt with usually three cartridge pouches, each carrying 30 rounds. Overcoat is carried rolled and strapped on top the pack. Intrenching tool is carried by all the men; in each squad there are usually two axes, four picks and eight spades or shovels; in some squads I have seen one axe, six picks and seven shovels.

Rifles. For the most part the Lu-chun is armed with Mauser rifles and carbines, but not of uniform make or caliber. Many have been bought abroad, but more have been made at the Shanghai and Hankow arsenals. These latter are the '88 model, 7.9 mm. The bayonet is the knife pattern, carried in scabbard on the belt. There is a small leather loop on the side of the belt that passes over the handle of the bayonet and prevents it slipping out of the scabbard and also prevents the scabbard having an excessive swinging motion when on the march There are several regiments armed with the new model Japanese rifle; also many with later models of Mauser-rifles.

The entire weight carried by the soldier is 40 Chinese catties; that is, 54 pounds.

Drill. The men drill two hours twice daily. The drill is a sort of mixture of Japanese, German and Chinese movements but more closely follows the Japanese.

Musketry or target practice. Very little done at this so far, because of the large amount of ammunition required and the expense attached thereto. Many of the division stations are now provided with target ranges; the distance at which prac

tice takes place is generally 400 meters and less. The greatest amount of ammunition that I have heard of being allowed is 120 rounds per year per man, this being fired 10 rounds per month throughout the year.

Athletics. Great attention is paid to training in athletics—that is, to the use of athletic apparatus, such as ladders, rings, horizonal bar, parallel bars, throwing weights, jumping and pole vaulting. The Chinese soldier is especially fond of this sort of work and excels at it. I have not so far heard of any contests between division or garrison teams. Intercollegiate athletic contests have been held for several years past in China, but I do not know of the military colleges participating.

Intrenchments. Considerable instruction seems to be imparted the men with reference to field entrenchments, screening them with brush, etc., but they do not do so well in the location and manner of occupying them.

Guns. These are divided into mountain and field. As stated above there are six to a battery, and as there are nine batteries to a regiment, it gives 54 guns per regiment. In the north these are generally 18 mountain and 36 field. But in the central and southern parts of the country, where there are few or no roads, the proportion is usually 36 mountain and 18 field. It is quite probable that some of the divisions will only have mountain guns. The most of the guns are the Krupp 57 mm and 75 mm, but there are quite a few batteries of Japanese field pieces and some of the French Creusot gun.

It will at once be noticed that the varieties of rifles, field, mountain and machine guns that the army has render the question of the supply of ammunition a very difficult one. It seems that no uniform type of rifle or gun has as yet been adopted.

War Office. The Central Government War Office, or War Board as it is generally called by foreigners, the Chinese name being Lu-chun Pu, is of course located in Peking.

This Board consists of a President, two Vice-Presidents, and the necessary bureau chiefs, clerks, etc. Prince Ching, the Prime Minister, is nominally the head, under the title of Comptroller General. The Board is really administered by the actual

President, His Excellency Tieh Liang. General Yin Chang, just appointed Minister to Germany, has until very recently been the Vice-President and chief assistant, as well as performing the duties of an Inspector General. The office of Second Vice-President has been vacant for some time. There is also a General Staff, the duties and divisions of which are not yet well settled. The various bureau chiefs usually have the rank of Colonel only.

In each Province there is also a provincial war board, and as nearly all the troops are under the command of the various Viceroys, it is there that most of the work is done. These provincial boards are divided into four departments: 1, Operations Department; 2, Training Department; 3, Administration Department; 4, Supply Department.

The Governor or Viceroy is the Commander-in-Chief of the troops of a province.

Mobilization Scheme. Upon the issue of the order for mobilization, the First Reserves must bring each of the divisions from a peace footing to war strength. They must then form a Reserve Division and a Reserve Brigade—in all three brigades. These formations have the same numbers as their corresponding Regular Divisions (for example, 5th Division, 5th Reserve Division, 5th Reserve Brigade). The regiments of the Reserve consist each of two battalions. If there are not sufficient men in the First Reserve, then the Second Reserve must be drawn upon.

The Second Reserves are required first to complete the previously mentioned First Reserve formations, and then to form three independent Depot Battalions, one for the Regular Division, one for the Reserve Division and one for the Reserve Brigade. These Depot Battalions have 300 men in each company, are divided into four companies, and have a total of 1200 men to the battalion.

As a general principle each Depot Battalion fills vacancies in its own Division or Brigade only.

With the issue of orders for mobilization the commander of Depot Troops draws from the recruits eligible for service during the following year, a number double that required in peace. These recruits are trained with their depot battalions, and from there are used for recruiting purposes.

The Depot Battalions are formed in the locality of their Regular Divisions and remain there during the war.

Officers. With the issue of orders for mobilization the Regular Divisions which have a full complement of officers must send two officers per company to the Reserve formations.

In addition two non-commissioned officers in each company must be promoted to commissioned rank; two-thirds of these new officers, moreover, will be sent to the Reserve formations of their respective divisions.

One-third of the officers of the Regular Division must be sent to its Depot Battalion. In corresponding manner one-third of the officers of the Reserve Division and Brigade must be sent to their respective Depot Battalions.

With the issue of orders for mobilization the pupils of the senior classes of the military schools must be commissioned, in the event that they have been at least six months in this class. These will be ordered to the Depot Battalions of the Regular Division, Reserve Division and Brigade; but remain at the disposal of the Commander of the Depot Troops, who employs them to fill vacancies in their corresponding Divisions or Brigades.

The organization act provides, "on active service each infantry section receives an additional three squads from the First Reserve"—this means that each section will be doubled. A battalion has 504 fighting men and will therefore require 504 reservists; a division of 12 battalions will require 6048 men from the First Reserve. After the First Reserve has found 6048 men for the Regular Division, it will have to form a Reserve Division (regiments of two battalions each, that is 4032 combatants, besides a Reserve Brigade, another -2016 combatants. This makes a grand total of 6048, in addition to those furnished the Regular Division).

As service in the First Reserve is three years, the same as with the active troops, the scheme seems impossible of accom-

plishment. As service in the Second Reserve is for four years only, and there is bound to be wastage by death and incapacity, it does not seem that the Second Reserve could ever be stronger than the First Reserve. If the First Reserve is not sufficient it must call upon the Second.

Between the two they are therefore required to furnish 6048 men to the Regular Division, 6048 men to the Reserve Division and Brigade, and an additional 3600 men for the three Depot Battalions. It is apparently impossible for them to do this.

Military Schools. In every provincial capital there is or cught to be one primary military school, where cadets of the official class, usually from 15 to 18 years of age, are trained for the duties of officers. They usually are natives of the province and go through a three years' course.

Usually one foreign language is taught among their other studies. This is more often English, then German and then French, sometimes Japanese. After three years at this primary school it is intended that the cadets should go to the next higher, or what is known as the Middle School.

It is proposed to have four of these middle schools or colleges, to be located at Paoting-fu, Wuchang, Nanking and Canton or Sian-fu. None of these has yet been started.

A final course is to be spent at the Military University at Peking. This has not been started.

At present when the cadets leave the primary school most of them become officers at once, though quite a few go to Japan for a short time.

Though the regular middle schools have not been started, there is at Paoting-fu what is known as a quick course or short course middle school, which has some 1100 students sent there from the various provinces, after finishing the primary schools in these provinces. The term for this school is $2\frac{1}{2}$ years. It is a temporary substitute for the regular middle school that is to be located at Paoting-fu.

The Military School at Wuchang. There is at Wuchang, the capital of the Viceroyalty of Hupeh and Hunan, a rather

unique military school that I recently had an opportunity of visiting. It is a school started some years ago by the Viceroy, and is not counted as a part of the regular Lu-chun system. It is still the leading military school at Wuchang, though the Lu-chun primary school has also commenced. The course is for three years. The plant of the school is sufficient to accommodate 3000 day students. There are at present 1000 day students in attendance. After completing the course the best of them are commissioned as officers and the rest are appointed non-commissioned officers. All students are soldiers selected from the garrisons at Wuchang. The youngest, brightest and best developed mentally and physically are selected and detailed to attend the school. They live in the barracks, but report each day for school duty. At the barracks they get military discipline and necessary drill. There are five general classes or subjects taught in the school, viz: Topography; paymasters' and supply officers' duties; military science and allied subjects; navigation—for the service of the river gunboats; sanitary instruction.

There are ten Japanese and two German instructors employed, in addition to a large staff of more or less foreign educated Chinese. Many of the latter teach certain primary classes in arithmetic, history, etc., for the benefit of the men who are a little behind in such subjects. The work done by the class in topography is very fine; it would be creditable work in any country. We saw some of the classes at examination. The questions were written on the blackboard and the students had to write out their answers.

The classes, or rather sections of classes, undergoing the examination numbered from 55 to 65 in each room. Military ordered prevailed in the class rooms. The class leader sat nearest the door, and as soon as we entered he at once arose and called the class to attention. All stood up and assumed a correct military position.

A report made to the Throne about a year ago divided the primary schools in operation in three classes, as follows:

1st class, in Chihli, Shantung, Heilungchiang, Kiangsu,

Kiangsi, Shansi, Honan, Kweichou, Shensi, Yunnan and Fengtien.

2nd class, in Hupeh, Hunan, Anhui, Szechuen, Souenyueng, Kirin, Kwangsi and Kwangtung.

3d class, Chekiang, Fukien, Sinkiang (New Dominion) and Kansu.

Hsun-fang-tui. These are the present day representatives of the old-time provincial troops; they are and always have been independent of the Lu-chun Pu in Peking. They are in some measure regarded as the special property or appanage of the Viceroy or Governor. They exist in all provinces of the Empire. As said above, they would be more properly called constabulary rather than regular troops. Their functions are very similar to those performed by the constabulary in the Philippine Islands. The War Board has designated them as forming the second line of defense of the Empire until the reserves of the Lu-chun are fully organized. For that reason they have become of more importance and an effort is being made to get them all more or less uniformly organized, equipped and drilled. In some places they have been partially trained according to modern methods, but their organization is such that they are in no sense a homogeneous force, and it is difficult to estimate the real value of them. Probably the best they have ever had were the provincial troops of Li-Hung-chang just prior to the Japan-Chinese War of 1894-95. These troops were modern armed and drilled by German instructors, but they were not in any sense really national troops. There is a remnant of this old army in Chihli Province and also in Manchuria.

The reorganization of the provincial troops commenced some eighteen months ago. They generally have no organization into regiments, brigades or higher units. They are formed into "camps" or battalions and then grouped into territorial districts. These camps are divided into three companies. The company consists of one Captain, one Lieutenant, 80 privates and the necessary buglers, orderlies, cooks, etc., making a total strength of 97 to the company. This gives to the battalion (camp or Ying, the Chinese name), with the commanding of-

ficer and necessary headquarters men, a strength of 301.

The cavalry camps are similar to the infantry in organization, except that each company has only 40 privates and the battalion a strength of 181.

They have no regular organized artillery.

Districts. A province is generally divided into five districts called the right, left, front, rear and center. Each district has from four to ten camps or battalions. In these districts the camps are generally split into small detachments and occupy many stations so as to cover the roads and protect the villages, the main duty of these troops being to chase down robbers; also to carry the government messages, where they are cavalry. Practically all of them have modern breech-loading rifles, a few years behind the times, but these small detachments seldom, if ever, drill.

In many places the cavalry is the irregular cavalry, occupying permanent stations and forming part of the regular inhabitants.

The pay of the Hsun-fang-tui varies in provinces, but is generally less than that of the Lu-chun, the pay of privates in most provinces being 3.6 taels per month and that of the irregular cavalry from 7 to 8 taels, but they must own their horse and find his food.

The men wear the old style uniform, generally dark blue cotton cloth, with black turbans (long pieces of cloth twisted around the heads), which makes a very becoming uniform.

The turban especially is the most becoming part of any uniform seen in China; it looks far better than the foreign style forage cap adopted in the Lu-chun. Chinese cloth boots or shoes are worn, though in some places the men have a Chinese pattern boot made of leather.

Many of the Hsun-fang-tui are quite reliable troops and usually have courage enough, though not possessing the technical skill and instruction. At the recent mutiny at Anking, Anhui Province, it was the Hsun-fang-tui that stood true to the Governor and enabled him to quell the mutiny of the Lu-chun troops.

The Hsun-fang-tui of Hupeh Province has recently been much strengthened by having some of the reservists of the Luchun of that province enrolled in it.

The Viceroy of Manchuria has recently submitted a memorial to the Throne about the Hsun-fang-tui of Fengtien Province and the expenses of maintaining the same. He quotes for them the same rate of pay as the Lu-chun. As they cost therefore as much as the Lu-chun, man for man, and are not as efficient, there seems to be no particular reason for maintaining them. It may be that the Lu-chun, if dispersed in as small detachments as the Hsun-fang-tui often is, would become worse than the latter and would not get along so well with the people of the country.

It is understood that when the reservists of the Lu-chun are complete in number, the Hsun-fang-tui will be converted into police and cease to exist as soldiers.

There is one more small force that is unique in its formation and the duties that it is supposed to perform, and it may be of interest to mention it. That is the River Police of the Yangtze. Most of the troops in the Yangtze Valley being provincial and not able to pursue robbers beyond the limits of their province, rendered necessary for the proper police of this great river the organization of a force independent of the provinces. This force is more haval than land.

Organization. This consists of 22 battalions of 3 to 5 companies of 7 to 8 boats each, as follows: Five battalions of 43 boats each, or 215 boats; seven battalions of 30 boats each, 210 boats; ten battalions of 23 boats each, 230 boats; total, 655 boats.

Each boat carries 14 men, including a sergeant and corporal, and has a commanding officer who ranks from Major (in the case of 44 of them, being commanders of half battalions) to 2d Lieutenant. This gives for the strength of the organization a total of officers and men, 9,849.

The boats are the old-time river war junks. They are heavy, clumsy wooden affairs, poled, sailed or towed by the men and usually gay with bright banners and flags. Some of

them, probably not more than 65 to 80, are armed with Hotchkiss one-pounders (one to a boat), mounted on naval tripods. The one we inspected carried only 90 rounds of ammunition for the Hotchkiss. Each boat also carries seven Mauser rifles and 1,000 rounds of ammunition.

The men receive 3 taels per month pay and three uniforms per year. Two uniforms are black and one red; all unlined; they wear turbans and cloth boots or shoes. They have little or no drill and live a rather lazy, care-free sort of an existence. Their headquarters are in the town of Tai-ping in Anhui Province.

On the boat we inspected the Hotchkiss and rifles were in a very clean condition, but all the parts were badly pitted with rust marks; evidently the former commander of that boat had been careless.

There are various other special bodies of troops, the organization of which is old. Among these may be mentioned the troops under the control of the officials charged with the superintendence of the grain and silk tribute, the troops of the salt administration, the railway guards, etc. Some of the railway guards are the equal of the Hsun-fang-tui.

Imperial Guard Corps. The latest organization to be attempted is the formation of a Guard Corps similar to that maintained in European countries." It is contemplated to ultimately make this into an army corps of two divisions. But for the present, due to the lack of money, lack of officers, etc., it has been decided to organize only one regiment of infantry of three battalions, one battalion of artillery of three batteries of four guns, two squadrons of cavalry, and one company of pioneers.

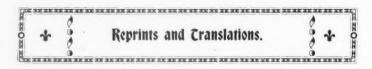
The pay of these troops will be nearly double that of the ordinary troops, being 8 taels per month. The men are to be entirely Manchus, the officers to be chosen wherever the best can be found irrespective of nationality.

The commander of this force will be Price T'ao, a younger brother of the Prince Regent.

Summary. It is practically impossible to make an esti-

mate of any accuracy as to the number of troops under arms in China. The numbers of the Hsun-fang-tui vary very much in the different provinces, as much or more than the qualities of the troops themselves. It may be safely said that in most provinces the number is under rather than over 10,000. The special forces may be neglected. We would then have for the Luchun (first line) 140,000 to 150,000, and for the Hsun-fang-tui (second line) 180,000 to 200,000.

It must be borne in mind, however, that this is not a homogeneous force equipped for taking the field.



INDEPENDENT DETACHMENTS .. *

By Major A. BUDDECKE.

The fewer experiences in actual war an army has, the more must it, in its work in time of peace, call on military history for counsel and advice. This is plainly shown in all exercises tending to the education of troop leaders. Mere imagination can never replace reality in the formulation of problems and may create situations which possibly have the appearance of war conditions, but which have nothing in common with them. There is also great danger of falling into ruts leading to one-sidedness. Only when problems are based on recent military events will they become natural and correspond to actual war conditions and thereby form advance preparation for them.

It is a strange coincidence that everyone sketching out problems for larger bodies of troops or map problems gives preference to situations in which a mixed detachment operates independently or only in very loose touch with the main command and therefore appears as an independent detachment. The reason for this may be found in the fact that the situation of a detached body of troops can be confined to more sharply drawn limits than that of a body of troops in close connection with an army and in that it confronts the leader of the detachment with a concise, independent situation. Although such a manner of

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sketching out situations has large advantages, it is justifiable only so long as it sticks close to reality and does no violence to things by detaching a part of an army which actually would not be detached or supposes the sending out of a detachment which is not justified by the general situation.

It might be of interest and of value to scrutinize military history for cases in which independent detachments have been sent out, what experiences were gained thereby, and of what importance these may be for future wars.

The appearance of independent detachments may be found in all stages of the war. In the beginning of a campaign already the necessity for sending them out may arise through the political situation, or if we are confronted by several opponents, and if we have to reckon with danger coming from different diections. However desirable it was to Prussia in 1866 to keep together all of its forces for the decisive battle with Austria, the position taken by Hanover and the South German States made the sending out of independent detachments absolutely necessary. After the destruction of the Hanoverian army and after the situation had thereby assumed a more favorable aspect, the decision of Prussian General Headquarters to attach the divisions under Generals Beyer, Goeben and Manteuffel to the Mayence Army was of decided importance. The utilization of these combined forces led to the defeat of the South German torces, which, although split up, were double the numbers of the Prussian forces.

Similar was the situation at the opening of the war of 1877-78. Here also the political situation on the side of Turkey, the prior battles with Servia and the uncertainty of conditions in Turkey, had led to a splitting up of forces, which compelled Turkey to operate with detachments against the Russian Army. Although the Turks had in this the advantage of the exterior line and could effectively interfere with the flank of its opponent, who had advanced beyond the Danube, they could prevent the Russian offensive for but a short time, because they could not untilize their *combined* forces. Even the well planned flank attack of Osman Pasha changed into the defensive very

soon and finally ended in defeat, opposed by the continually augmenting and enveloping Russian force. This example shows at the same time that operations of single parts of a force against the flanks of a concentrated army are of little value if not going hand in hand with a forceful frontal attack.

Geographical conditions also, such as the projection of a part of the frontier into hostile terrain, may lead to the necessity of giving the mobilized forces there an independent task. It was just such a condition which enabled the Austrian General Headquarters to take advantage, at the opening of hostilities in 1866, of the isolated position of the 1st Austrian Corps and of the Saxon forces. Had it been the desire of the Austrian Commander-in-chief to attack with his main forces the 1st Prussian Army defiling from the mountains, then the 1st Austrian Corps, in conjunction with the Saxon forces, would have received the task to oppose the 2d Prussian Army and the Army of the Elbe so long on the Iser sector, until a decision had been arrived at with the 1st Prussian Army; but in case the Austrian Commander-in-chief desired to send only detachments against the 1st Prussian Army, and to throw all of his forces against the other two armies, the 1st Austrian Corps and the Saxon Army would have had to contain the opponent until the arrival of the main body of the Austrian Army. The erroneous views of the Austrian Commander-in-chief and his uncertain orders concerning the tasks of the detached corps, however, led only to the fact that that corps, after a short resistance on the Iser, abandoned this strong sector and the road to Gitschin to the enemy. This situation clearly illustrates how much depends in such detachments on the task set and how necessary it is to clear up all doubts on the part of the detachment commander concerning our own intention.

Especially difficult is the situation of detached bodies of troops when the General Headquarters is forced, like in the Russo-Japanese War, to designate a point far in rear of the concentration of the army. The sending ahead of a single part of the army is then justifiable only when the question is to gain a definite object, possibly a strong point of support, or an im-

portant line of communication, or when the object is to prevent a debarkation. Duties of a general nature, as, for instance, to gain touch with the enemy, reconnaissance or interruption of the hostile advance, should always be left to the cavalry. Accordingly, the sending, on the part of the Russians, of strong detachments to Liaotung and into the Ussuri country for the protection of Port Arthur and Vladivostok as necessary points of support to the fleet was entirely correct; but the detaching of the East detachment under General Sassulitsch towards the Yalu was a strategical error. The instructions given General Sassulitsch were impossible of execution on their face—to prepare obstruction to the Japanese advance first on the Yalu and thereafter in the Tschanboschan mountains and to avoid a serious engagement. Such instructions condemn the leader in the start to the undesirable role of inviting defeat, even if he sees a possibility of success. And even then when the leader, suppressing all desires for honor, does his best to act in obedience to his instructions, it will be difficult for him in any case to form a correct judgment when a battle should be accepted and when broken off. The definition between a containing and a decisive battle is difficult to arrive at and the boundary between the two easily overstepped, even against the will of the commander. Consequently General Sassulitsch should be blamed less for the heavy defeat on the Yalu than the Russian General Headquarters, which latter placed this corps in a position 200 km. in front of the main army and subjected it to the attack of superior Japanese forces. Such a manner of utilizing advanced corps we might designate as strategical advanced positions, which are as little useful as the now obsolete tactical advanced positions.

And even under otherwise normal conditions, the entire operations can be influenced by the operations of separate detachments as when one part undertakes to forcibly break through the line of frontier guard, to gain an insight into conditions with the enemy, to interfere with its mobilization and advance, or to secure to itself some local advantage. Such enterprises, on which war games are based occasionally, are full of dangers,

especially if we have no start over the enemy in readiness for operation so as to enable us to maintain possible advantages gained, or to utilize them. And they may become absolutely fatal if they are undertaken as a way out of a dilemma, for instance, to satisfy public clamor. In this respect the opening acts of the campaign of 1870-71 on the side of the French furnish warning examples. Frossard could not do much against the Detachment of Pestel, but ran into the danger at Spichern of being annihilated by the advancing corps of the 1st and 2d German Armies. The advance of the Division of Abel Douay at Weissenberg for the purpose of observation was also a grave error.

In general, the use of independent bodies of troops in front of the army in this stage of the war has never been justified. The duty of reconnaissance and observation had best be left to the cavalry division, and that of guarding the frontier to smaller mixed detachments. In this respect the detachments under Pestel and v. Seubert in 1870 and those under Count Stollberg and v. Knobelsdorf in 1866 performed excellent service, and not only kept the enemy at a distance, but also deceived him concerning the movements of their own army.

At the beginning of operations we had best limit the detaching of independent bodies to what is absolutely necessary, as every detachment sent out weakens the main force and may give the opponent an opportunity to gain a partial success.

In this respect the Russian manner of conducting operations in the war of 1904 furnishes an example to be avoided. Though threatening Port Arthur, the Japanese seduced the Russian Commander-in-chief to abandon his original plan (to first concentrate his army at a distance from his opponent and then to attack him in superior numbers), and march with all of his available forces in a southwesterly direction to Port Arthur. In this movement it was intended that the corps under General Stackelberg, which had been sent on in advance, should form the advance guard. The duty which should have been set this corps ought to have been to execute an energetic offensive movement, the success of which should have been fully utilized by

the main body. Only in this manner could the Russians, in conjunction with the troops there, hope to gain any success over the Japanese and to prevent the investment of Port Arthur. In place of this General Stackelberg received a duty, more in the nature of a demonstration, as follows: "The corps under your command is charged, by advancing toward Port Arthur, to draw as many forces of the enemy as possible to itself and to thereby weaken the enemy's force now operating in the Kwantung Peninsula. Consequently your advance on the security troops in the North has to be made quickly and energetically, in order that these, assuming that they are but weak, may be defeated as soon as possible. In case you encounter superior forces, you should not carry on a battle to a decision and your reserves should not be drawn into any battle so long as conditions are not completely clear." It is not to be wondered at that with such indefinite orders General Stackelberg, when meeting equally strong forces of Oku's army, did not dare to act energetically and allowed the opportunity for a decisive victory, which might have turned the scale in favor of the Russians, to slip by. And consequently the "adventure," as Stackelberg's chief-of-staff dubbed it, shared the fate of all such undertakings, i. c., the detached corps is defeated and thrown back on its main army with heavy casualties. And this caused the Russian Commander-in-chief not only to abandon his offensive intentions, but also to lead his army back into its former position at Liaoyang. On the other hand, this first success inspired the opponent to a general offensive which gave him a permanent advantage over the Russians. The single advantage which that advance toward Port Arthur carried in its wake was a short delay in completing the investment of that fortress. This example at the same time illustrates the dangers attending a strategical advance guard.

The case is quite different when at the opening of operation the military situation shows an opponent's weaknesses, which may be utilized, and when the possibility exists of taking possession of some point of importance to the course of the campaign, such as a sector of a stream or a mountain pass. In that case the advance of a separate part of an enemy may be of the ut-

most importance. Such a duty was successfully carried out at the opening of the Russo-Turkish war in 1877 by General Gurko, when he was sent, after the Russians had crossed the Danube, with a mixed detachment of some 12,000 men to the Balkans to take possession of the Shipka Pass, of so much importance to the army for the intended offensive movement on Constantinople. Gurko's unexpected and sudden advance, utilizing to the iullest extent the unpreparedness of the Turks, not only succeeded in taking that mountain pass, but also a considerable stretch of country beyond it towards the South, and would have brought the Russians in a very short time to the objective of their operations if the main army had followed on the heels of this advance guard. But the available forces were not sent to follow Gurko and the latter's success was partly lost. But in spite of this, the undertaking had a great influence on the final outcome of the war and furnishes us a special typical model for the guidance of troops sent out on a similar mission.

A partition of forces, leading to the detaching of single corps, might also be justifiable when the proximity of the enemy requires the crossing of a considerable obstacle, such as a stream, a mountain ridge, part of a delta, a piece of swamp land, or a line of forts. The successful crossing of an obstacle and the necessity of appearing on the other side of it with strong forces may lead to an advance on a broad front in several columns. In such a case we should remember that one column opens the road for another and that there is a possibility for successfully deceiving the opponent as to the actual place where the main force intends to cross. The greater the enemy's degree of readiness, the more hazardous and difficult will such an undertaking be. In this respect the Prussian entry into Bohemia in 1866 will remain a model for all times to come. And the deployment of the 2d Prussian Army from the mountains shows specially how much the separated columns have to endeavor, in such a situation, to give the impression that they are alone, and how much the success or failure of the one column influences the fate of the other.

Such an advance may also lead the enemy to send out de-

tachments, should he not have all of his forces in readiness, or should he intend to utilize them in some other direction. Such was the case in the above instance with the Austrian Commander-in-chief. With the intention of effecting the concentration of his army at Josephstadt and thereafter advance on the army of Prince Frederick Charles, Benedek sent the 6th and 10th Army Corps to Nachod and Trautenau with instructions to "advance with full energy" on the columns of the 2d Prussian Army defiling from the mountains. The course of this operation shows, however, that strong detachments are inadvisable in such a situation. The victory of the 10th Austrian Corps over the 1st Prussian Corps at Trautenau was more than offset by the defeat of the 6th Austrian Corps at Nachod and of the 8th Austrian Corps at Skalitz. In such a situation the defender would have more chance of success if he kept his forces together in order to defeat with them parts of the enemy's army coming separately out of the mountains. Of course we should so act in this that the opponent can gain no advantage from possession of the exterior line. This is illustrated by the crossing of the Balkans by the Russians in 1877-78. The concentrated Turkish Army awaited on the south side of the mountains the separately advancing columns under Skobeleff and Mirski. But the Turks did not succeed in defeating the Russian columns before they joined. The result rather was that the Turkish force, although superior to each one of the Russian columns, was held by one column, while the other enveloped it and finally forced it to surrender on an open field.

Crossing a river in face of an enemy will in most cases necessitate sending out detachments, for the purpose of demonstration. The Russians, in crossing the Danube in 1877, to screen their main crossing which was intended to take place west of the quadrangle of fortresses held by the Turks, sent the 14th Army Corps to cross east of the quadrangle and occupy the Dobrudscha, from where General v. Zimmerman was to prevent Turkish operations against the Russian lines of communications to the rear and to draw the attention of the Turks to himself by offensive movements. This detachment, reënforced

by another division, succeeded completely in its object. But it had the disadvantage that this army corps and a half remained inactive there during the campaign and was lost to the Commander-in-chief for the main operation, and consequently this latter was not carried through with the desired celerity. In this case the separation of the Turkish forces was of advantage to the Russians.

In the Austro-Italian campaign of 1866 the alert opponent prevented the enemy from crossing the Po. In the latter instance also one corps under General Cialdini was sent to the lower Po to deceive the enemy as to the true measures to be taken. But the project failed and led to the great disadvantage that this force, consisting of five divisions, was disabled and could take no part in the decisive battle.

The opening of operations in the campaign of 1864 shows a successful forcing of a considerable frontal obstacle. The advance of the allies against the Danish works and the Schlei line was made in several separate columns. The corps under Prince Frederick Charles operated entirely independently, and by crossing the Schlei caused the Danes to abandon their fortified position without battle—Later in that campaign the Allied General Headquarters endeavored to gain success through sending out detachments, and decided, on the advice of General v. Moltke, to send one corps across to Alsen to support the attack on the Duppler Schanzen (trenches) and to assist in the preparation for the complete annihilation of the Danish forces.

Separate objective points also may lead to a division of the force, as is shown by events in the Armenian theater of war in 1877-78. Here the Russians operated in four columns of about 25,000 men each against Batum, Ardagan, Kars and Bajaset. But they were unable to decisively operate at any one point, while a single combined offensive against the Turkish field army would have promised an absolute success, which would have cartied in its wake the gaining of secondary objects.

The marches to the main decision will be, for the purpose of readiness for battle, as a rule, in the future carried out with full utilization of the network of roads and in the closest formation possible. This course is especially advisable when we have no exact information concerning the whereabouts of the enemy. Then we will at least have the assurance of appearing at some point with superior forces. Napoleon is indebted to his adherence to this maxim for his success (Jena). When he did not act in accordance with this rule, as in the winter campaign of 1806-7 at Putulsk and Eylau, his attack did not have the desired annihilating effect.

A departure from this rule may be made necessary, however, by difficult terrain. The corps of the 2d Prussian Army, in 1870-71, during their advance on Orleans and later on Le Mans, were kept apart by the conformity of the terrain, amounting to a complete partition, and the consequence was a series of fractional battles instead of one decisive one. This situation in war consequently furnishes a number of examples of independent action on the part of subordinate commanders.

During the march of separated parts of an army from different directions the insertion of connecting units is to be recemmended as was done by the Japanese in their advance on Liaoyang; to connect the first and second armies an independent command consisting of one-half of the Guard division and the 10th division was put between the two armies.

Protection of the flanks against hostile forces or against fortified places may also lead to sending out detachments which have to keep on the defensive or offensive according to the situation. But the smaller the forces thus detached the more favorable will conditions be for the main army. The conduct of the Japanese in 1904 furnishes an example worthy of imitation. After taking the Nanschan position they left but one division operating against Port Arthur and left with all the remainder of the force for the decisive battle. They were justified in such a hazardous undertaking, as they could reasonably hope to continue the investment of Port Arthur from the land side in the strong position until the troops designated for the investment could arrive. A similar task fell to the lot of the Badenese division in 1870, which was left behind by the 3d Army when it advanced toward the upper Moselle, for the protection against

Strassberg and the French forces appearing at that time in upper Alsace,

The Italian General Headquarters fell into that serious error of detaching too strong a force in 1866 when it crossed the Mincio for the decisive battle and left 3½ divisions in front of the but weakly garrisoned fortresses of Mantua and Peschiera. The absence of this force was felt most bitterly in the battle of Custozza.

But very seldom will detachments be sent out from the vicinity of the *decisive battleground*, as both opponents will act on the principle that we cannot be too strong in seeking the main decision.

That very much desired "enveloping" the opponent, which often decided the battle, has almost invariably been the result of an advance on a broad front by overlapping the enemy, or by bringing up the reserves, as is illustrated by the German deployment at Woerth and Sedan. It will be an exception, however, when the defender will, of his own volition, lay himself on the operating table and give the attacker time to consider where to insert the knife. We will have to reckon with a mobile opponent, and, as a rule, we will not have such exhaustive information as to his movements as to be able to count with certainty on enveloping him. On August 18, 1870, the German General Headquarters could issue orders for the enveloping movement only after information had been received, in the course of the day, as to the position of the hostile right wing and could execute the enveloping movement only by bringing up the last reserves. In such a case it may happen that we are wrong in our estimate as to where the hostile wing really is and that the troops designated to execute the envelopment will encounter a hostile front, as did the 9th Army Corps at Amanweiler and the 16th Infantry Division at the Hallue. In the latter case General v. Manteuffel was thrown from his intended offensive to the defensive and was enabled to break the enemy's power only through a stubborn resistance.

As a matter of fact we find but few cases in later military history where, as at Bautzen, detached parts of an army brought about a decision in the main battle through flanking movements. In 1870 even the German beloved "marching to the sounds of cannon," to which we are indebted for a part of our successes, leads only in rare cases to an actual envelopment. At Spichern the far-reaching enveloping movement of the 14th Division via Volklingen and Rossel on Forbach did not have the expected success, for it came too late and was not carried out with the necessary energy. Only too easily are leaders of such movements intimidated and held back by a decided opposition of even weaker detachments, especially if they are not sufficiently informed as to the status of the main battle. An exception to this is the conduct of General v. Lestoq, at Eylau, who sent but a detachment against the advancing Ney and took part in the main battle with his main forces.

Only an exceptional situation, like the one leading to the battle of Vionville, shows one of the very few military historical examples where the battle is influenced by the successive arrival of detached parts of the army. But here also it is apparent that the leaders of the detached bodies, knowing themselves to be weak, were more inclined to seek connection with the troops already engaged in battle than to operate independently against the opponent's flank.

Detaching a part of an army when a decisive battle is expected is always dangerous, as is illustrated by the defeat of the corps under Mortier at Austerlitz in 1805, and especially so is the sending a part of the army to the front for the purpose of a reconnaissance in force. By doing this latter the Austrians sustained a partial defeat at Montebello in 1859, and this reconnaissance did not at all clear up the situation.

In war it will but seldom happen that a secondary battle of detachments takes place on the periphery of the main battle, as is frequently the custom in peace maneuvers, where one part intends to interfere in the main battle and another part prevents it therefrom. An exception to this rule, and at the same time a reproach for such a situation, is illustrated by the operations of the corps under Tumpling and the Vinoy during the decisive battle at Sedan. A French army corps was sent from

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Paris to protect the connection and lines of communications to the rear and to eventually take part in the decisive battle; a German army corps and two cavalry divisions had been sent out with instructions to furnish security against Paris, to threaten the hostile connections, and to prevent hostile forces from gaining the rear of the German army or to get to Paris. The results plainly show how difficult the situation of such independent corps is and how little we should expect from them. While General Vinov, whose orders were not definite enough and who was not sufficiently informed as to MacMahon's situation and intentions, was unable to make connection with the main army and could not prevent, even though he occupied a stretch of the Maas, the crossing of parts of the German army between Sedan and Mezieres, and thereby prevent the complete surrounding of the French army, the Sixth German army corps, reënforced by the Fifth and Sixth Cavalry divisions, allowed the opportunity to slip of preventing the retreat of the weaker forces of Vinov and to prepare them a Sedan on a smaller scale. There was an absence of decisive action on both sides, another proof that the leader of an independent detachment being in the uncertainty, which as a rule surrounds the entire sphere of a decisive battle, is apprehensive as to his own fate, and does not always dare to come to a bold, independent decision.

The pursuit after the decision has fallen cannot be taken up with the combined forces if the retreating hostile forces separate in different directions, or when our own army has suffered heavily and needs rest before continuing operations. In that case sending out detachments is correct, and these detachments will gain their object the sooner, the heavier the defeat of the hostile army has been. Napoleon's pursuit after Jena illustrates this clearly. The general stuation after Orleans also caused the German General Headquarters to send the army corps in diverging directions; to the upper Loire, to the Sologne and towards Tours, while after taking Le Mans it confined itself to the sending out of pursuing detachments (v. Schmidt and Behmann). The commanders of such detachments have a difficult task and have to combine audacity with prudence in

order to damage the enemy as much as possible without themselves running danger of disaster. How many dangers are run by pursuing detachments, if the hostile army has not been thoroughly beaten, is illustrated by the fate of the corps under Vandamme at Kulm. It was Napoleon's original intention after the battle of Dresden to follow the main army of the allies across the mountains into Bohemia, but when he received information of the defeat of Oudinot and MacDonald he drew back all of his forces to Dresden, and in doing so left the corps under Vandamme to its fate—annihilation.

After the opening battle of a campaign, during a further advance into the enemy's territory, the necessity of detaching bodies of troops may often arise independent of detaching pursuing detachments. The advancing victor must take proper measures to protect his flanks and communications to the rear against new formations of the enemy, dispersed detachments, and turbulent inhabitants. He will have to take smaller fortified places out of hand, and will have to send detachments against larger fortifications for observation and investment (as the First Prussian army corps at Olmutz in 1866), and will have to protect the investing troops by sending out detachments to prevent hostile relief operations.

The numerous duties involved in this are aptly illustrated in the second phase of the campaign of 1870-71 by a number of examples, the most prominent of which is the sending out of the corps under Generals Von Werder and Von der Tann. The advance of the German armies to Western France and the protection of their communications to the rear, as well as the protection of the force investing Metz against the newly forming organizations in Southeastern France, absolutely required the detaching of the 14th Army Corps under General v. Werder. His operations show a number of consecutive duties which may fall to the lot of an independent corps in such a situation. His first duty, after the fall of Strassberg, was to advance toward the upper Seine to prevent concentration of troops in the Department of the Vosges, Haute Marne and Aube, to disarm the inhabitants, to reconstruct the Blainville-Epinal-Chaumont raii-

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road, to attempt an offensive movement against Langres and to furnish security against Belfort. In carrying out his task and to facilitate his deployment from the passes of the Vosges, General v. Werder had to fight with the advance troops of the Army of the Vosges, then organizing under General Cambriels. During his march to the upper Seine he received instructions to try conclusions with the hostile troops then organizing at Besancon, the strength of which German General Headquarters greatly underestimated, and thereafter to march via Dijon on Bourges. After the fall of Metz and after the Second Army had marched to the Loire his orders were changed again and directed him, after the 1st and 4th reserve divisions had been attached to his command, to invest Schlettstadt Neubreisach and Belfort to protect the left flank of the II Army and to hold mactive the hostile forces opposed to him on the upper Saone. Shortly after that he received orders to proceed offensively against the last named forces, which in the meantime had been increased to three times their original strugth. In consequence of these divers orders General v. Werder conducted an "energetic mobile campaign" by sending out detachments from his position at Dijon into different direction (Langras Nuits). Only by the appearance of Bourbaki's army was General v. Werder thrown on the defensive and forced to confine himself to the protection of the force investing Belfort by holding the Lisaine line. His detachment has the appearance of a large raiding force, the activity of which shows how much ar independent army corps can accomplish when it acts on the maxim "celerity doubles the battalion."

To secure the troops investing Paris against the newly formed parts of the French Army on the Loire in the North of France, it was necessary to send out the corps under Manteuffel and Von der Tann, which also sought to perform their tasks by offensive movements. General Von der Tann's proceedings, like Von Werder's, showed a varied course. After gaining successes in the start (at Artenay) the uncertainty of the situation forced him to break off the pursuit of the enemy and to take up a position in observation at Orleans, until his re-

treat was made necessary by the ever-increasing hostile forces, and this retreat General Von der Tann had to fight for at Coulmiers.

After the II Army reached the Loire, this Army Corps and the 13th Infantry Division were inserted between it and Werde's corps, and thereby a continuous protection to the south was formed for the force investing Paris. As nothing much was known concerning the enemy's situation, and as it consequently was doubtful whether these forces would be needed on the Loire or on the central Saone, each message received changed the duty and gave rise to a continuous shifting of the detached corps.

Numerous operations to take smaller fortified places interfering with the advance or with the lines of communications were undertaken in this phase of the campaign. The independent action carried on by the different detachments were, as a general rule, unsuccessful in the campaign of 1870-71. The introductory operations against Diedenhofen, Toul. Verdun and Montmedy, in spite of the large amount of ammunition expended, were resultless and only the operation against Rocroy was successful. It is true, of course, that at that time there was no heavy artillery with the field army. How valuable heavy caliber artillery is, is illustrated in the Austro-Italian campaign of 1866, by the success of General Nunziante, who was sent, when the Italian army crossed the Po, with one division and 74 guns, half of them heavy caliber, against the fortress of Borgoforte, which he took after a short bombardment.

An army defeated in a decisive battle and retreating over a considerable terrain, may be forced to send out detachments corresponding to rear guards or flank guards, to contain the pursuing enemy or to deceive him concerning the true lines of retreat. In that manner General Benedek, during his retreat to the Danube, sent out a mixed corps under General Von Rothkirch toward Tobitschau, to cover there the march of the main column to Prerau. Through the advance of the left wing of the II Prussian Army on this position, ensued the battle of Tobitschau, the result of which had a material influence on the

decision of the Austrian commander-in-chief because it caused him to debouch from the direct road to Vienna and march through the Carpathian mountains into the Waag valley. This frustrated the desired junction of Benedek's army with that of the Archduke Albrecht at Vienna and left the Prussian General Headquarters a free hand against the latter. And to still further delay the junction of these two armies, the Prussian General Headquarters sent the IV Army Corps via Blumenau with orders to take Pressburg and cut the line of communications of the two armies; while the Austrians sent one corps to Pressburg to protect the important point and also to occupy Blumenau. The armistice made an end of the battle of these two detachments just about the time the decision was expected.

When operations are at a temporary standstill, detachments are frequently sent out, as was the case on the Loire after the decisive battles at Orleans and after the pursuit had been abandoned. The corps, which was sent forward, by the II German army, concentrated at Orleans, for protection and for observations of the upper Loire; also those sent towards the Sologne, toward Tours and to the Loire, may well be designated as strategical outposts. Between these and the mobile columns, which for instance General Chanzy sent out for the same purpose, ensued a series of battles, in which the leaders had full opportunity to act independently. Especially instructive are the actions of the Detachment Rantzau at Gien and Briare, and those of the 20th Infantry Division (Kraatz-Koschlau) at Vendome.

Considering all of the above illustrations of later military history, we may truly say that detachments have certainly been sent out in all phases of operations, but that they, being incorrectly employed, have been disadvantageously employed. If the sending out of detachments in the past has proved to be correct in only exceptional cases, there will in future, in European theaters of war, be even less opportunity for their utilization.

The characteristic fingermarks of future events in war will be the massing of troops in a limited field, which will happen not only in decisive battles, but already on the march, because

of the limited room, and considerations of combined utilization require this. The saving "march divided, and fight united," could be applicable only as long as armies were smaller and more mobile and had sufficient room to operate in. In the future the march to the front of an army will show a picture of a single, an almost continuous wave, rolling on to the enemy. The decision will be attained in a giant battle, especially a frontal one, and will be composed of a series of partial successes, in which the insertion of forces on and behind the battle front will play a great role, as is plainly seen in the decisive battles in the Russo-Japanese war at Liaovang and Mukden. Considering the great distances, the timely arrival at the decisive point of detached parts of an army cannot be reckoned on with certainty, even if in highly cultivated countries the net of railroads offsets in some manner the difficulty of moving large armies. To this we may add, that nowadays the composition of the cavalry divisions is such that they can replace in many cases the mixed detachments and will be able to keep hostile detachments from the field where the decisive battle takes place. But minor successes, which in times past were able to turn the scale in the war situation, will in future be unimportant as compared with the main decision.

With the continued growth of modern armies the possibility of sending out detachments and the purpose of independent bodies will be limited. The subordinate commanders will in most cases operate under the orders of superior authority and but seldom find opportunity for independent action.

EMPLOYMENT OF CAVALRY.

"WHAT LESSONS REGARDING THE EMPLOYMENT OF THE CAVALRY MAY BE DEDUCED FROM THE RUSSO-JAPANESE WAR?"

(By COUNT FRANZ ZEDTWITZ, CAPTAIN AUSTRIAN GENERAL SEAFF.*)

(Prize article in a competition instituted by the Cavalry Journal, Vienna, 1907.)

The technical progress of the last decade has given the infantry a long-range firearm capable of delivering a great volume of fire at many hundred paces, and, owing to the use of smokeless powder, with vastly diminished possibilities of detection.

In the same degrees the effectiveness of the artillery weapon and fire has increased by leaps and bounds; so that the end of the century sees these two arms of the service advancing, in imposing power and completeness of equipment, to the solution of their problem—the extermination of the enemy.

The highly developed technic of these days has been unable to offer to the cavalry an advance, in purely cavalry matters, equivalent to that of the other two arms. The cavalry of today must, in general, employ the same means in the solution of its tasks as it did in the days of the great Frederick. For us the perfection achieved by the highest professional training and the greatest versatility lies between very narrow borders, in comparison with the unsuspected technical marvels that have been absorbed by the other branches.

While the cavalry, busily employed in working out its own advancement, is becoming gradually accustomed to the thought that firearms are essential in the solution of its problems, the chorus of those that see in the rifle, at best, only an auxiliary weapon—or even airily dismiss it as a negligible quantity—will not be silent. And, as the reports of the mighty struggle for mastership in Eastern Asia were received in Europe, they ap-

^{*}Translated by First Lieutenant C. A. Bach, Seventh Cavalry, U. S. Army, for the Second Section General Staff, U. S. A., and reprinted by their kind permission.

peared to confirm the contentions of these opponents of the rifle. We read of battles lasting days, even weeks, in which the opposing infantry and artillery were engaged, but of the activity of the cavalry we heard relatively very little

In view of the little that is at present known concerning the conduct of the Russo-Japanese war, it would be premature to draw positive conclusions regarding affairs and events whose reasons or causes may not become known for many years, or possibly not at all. But owing to the excellent military reports received I believe that we may, even at this early day, deduce several valuable lessons, regarding the employment of cavalry, from the manner in which the opposing cavalry forces in Eastern Asia advanced to the solution of their respective problems.

The purpose of this article is to present these deductions. The article will limit itself to answering the following questions:

1. Are those persons correct who maintain that cavalry, in the future, must play a lesser role than it has heretofore; or will the cavalry of the future be able to meet the requirements made upon it, as it has in the past?

2. Can we deduce from the events of the Russo-Japanese war any lessons for the use of cavalry in future wars?

The functions of cavalry have been and are today, in general, the following:

a. The securing of information (using the term in its widest sense).

b. Strategic reconnaissance.

c. Tactical reconnaissance and security within circumscribed districts

d. The security and screening of our own movements and dispositions.

e. Assistance in deciding a battle,

f. Completing the pursuit of the enemy or retarding the enemy's pursuit.

g. Raids, harassing movements and expeditions against the enemy's lines of communications,

In the varying fortunes of the different epochs of this war first one and then the other of these functions was pushed prominently into the foreground; the conduct of modern war demands of the cavalry arm a great versatility for the solving of all its problems.

Naturally the first problem of the cavalry in Eastern Asia consisted in locating and ascertaining the strength of the enemy. But the goal of or the objects of this service of information were quite different in the two armies.

In the beginning of February, 1904, the Russians had but 35 squadrons (sotnias) of cavalry in Eastern Asia, but at the end of April, of the same year, there were about 100 squadrons. These were increased during the course of the campaign to about 210 squadrons. The Japanese, on the other hand, during the entire war had at no time more than 60 squadrons of cavalry in the field.

In passing it may be remarked that one cavalry regiment of three squadrons was assigned to each Japanese division as uivisional cavalry.

So, from the beginning, a much greater economy in the use of their cavalry was demanded of the Japanese.

The Russians had moreover a vital interest in the strategic reconnaissance of the Japanese. To them it was of the greatest importance to ascertain the time at which the Japanese should land, their forces, the place, the strength of the landing party and its further movements. All this was absolutely essential in order to enable them to intelligently make their own dispositions.

The Japanese, on the other hand, having left their country with a particular and specific plan of operations, had, as their first object, the crossing of the Yalu river. Detailed knowledge of the Russian situation and dispositions would not have changed this plan at all. Nevertheless, through their excellent spy system, they had a very good general idea of the Russian movements, and, in the initial stage, this was all that was necessary.

In spite of the fact that General Mischtschenko, with his brigade of Trans-Baikal Cossacks, had been stationed in Antung since February and that the landing of Kuroki's army, at the harbors of Chemulpo and Chinampo, continued from the beginning of February to the end of March, the Russian commanderin-chief was not informed of the strength of the Japanese forces that had been landed. The general concentration of Russian forces would indicate an expected attack from the direction of Inkou. Furthermore, when, after the forcing of the Yalu (May 1, 1904), General Sassulitch was compelled to retreat, he was reinforced with a vacillating, undeterminate hesitancy that argued a lack of knowledge of the Japanese movements on the part of the Russian commander. One cannot avoid gaining the impression that Kuropatkin considered Kuroki's army as only a weak force landed for the purpose of making a demonstration.

How could this happen? Why should Mischtschenko and his brave troops, who later evidenced such daring and enterprise, fail so miserably in securing information at the beginning of hostilities?

With no desire to be captious or fault-finding, it is impossible to escape the conclusion that the instructions for the strategic reconnaissance did not prescribe the objects to be aimed at in the reconnaissance with sufficient clearness. If the Japancse had been constantly observed during their landing, and if Mischtschenko's Cossacks had sent back full information regarding all possible landing places and the occurrences thereat, the mental picture formed by Kuropatkin would certainly have been much nearer the truth.

At this time, as well as later, particularly during the period between the battle of the Sha river and the battle of Mukden, there is evident, on the Russian side, a very palpable lack of centralization and direction in the entire work of information and reconnaissance.

Before going further it may be stated here that much of the difficulty experienced in securing reliable information is due to the lack of proper training in time of peace. I will return to this point later.

The service of information must be directed by a central authority, the districts of operations must be clearly assigned and the objects to be attained must be perfectly understood.

Otherwise the best of cavalry will be frittered away in objectless employments and will not serve its purpose.

Far more interesting, however, than the emphasizing of this well-known truth is the consideration of some rather remarkable occurrences in the work of reconnaissance.

On March 28, 1904, when Kuroki's army reached Anju and his advance guard had already crossed the Velim (Chongchyen or Chengchangang) river in its advance on Wiju, the first encounter of the war occurred between several squadrons of Mischtschenko's forces and Kuroki's advance cavalry. What happened? Both opponents designedly avoided the attack and contented themselves with a long-range small-arms duel until finally the arrival of Japanese infantry compelled the Russians to retreat.

The manner of conducting this preliminary skirmish is duplicated in countless cases throughout this entire campaign. While in the later periods of the war the work of reconnaissance was conducted, on both sides, with vigor and pertinacity, the action almost invariably resulted in both parties resorting to the carbine.

Is this resort to dismounted fire action an unusual circumstance brought about by the character of the opposing cavalry, their methods of warfare and the nature of the East Asiatic terrain, or is it one with which we ourselves must reckon in the future?

The Japanese cavalry, as has been previously stated, was decidedly in the minority, indifferently mounted and much more inclined, because of these facts and by virtue of their national characteristics, to fire action. As the Cossacks, on the other hand, rarely encountered a mounted opposing cavalry, they also naturally adopted the same methods and opposed fire action with fire action. As a consequence the notable mounted attacks of this 16-months' campaign can be counted on the fingers of one hand.

Moreover, the entire method of warfare was unfavorable to our ideas of rapid enterprising reconnaissance. The securing and verifying of details regarding a hostile army at rest and well protected is naturally much more difficult than to secure the same data regarding a hostile army in motion. This campaign was, in fact, a war of positions in which, after a short, deliberate advance, the opponents sought refuge in new positions, which they strengthened as rapidly as possible. Thus a cavalry reconnaissance promised little hope of reward, as ofnecessity, it must be conducted around the flanks of a watchful army covering a very considerable front. Wherever the cavalry gained contact it encountered infantry in fortified positions, and, to avoid the disgrace of returning without information, it was compelled to resort to fire action in order to cause the opponent to disclose his strength, or at least indicate the character of his force.

To all these circumstances was added the unfavorable nature of the terrain, particularly the mountainous portion east of the Mandarin road, where practically no deviation from the normally miserable lines of travel was possible. In consequence, when cavalry encountered a hostile force, there were but two courses of action—to retreat rapidly, or to cut a way through the opponent and continue the advance.

The methods of scouting, so emphatically prescribed in our regulations, were not employed by either of these two great forces in the Far East. Neither Japanese nor Russians, in their work of observation and reconnaissance, made use, as we do, of the services of capable, individual horsemen, who can readily conceal themselves, whose function it is primarily to observe, and who fight only in case of absolute necessity. On the contrary, their reconnoitering forces consisted usually of strong bodies, reinforced by artillery, which, in the pursuit of information, usually resorted to fire action.

Can we imagine similar conditions to prevail in our own army? Certainly. In the first place we can very easily picture curselves opposed to an enemy in position or to one who conceals his movements and dispositions by a well-placed covering force whose lines can only be penetrated at certain points, and then only with the aid of powerful fire action. And should such reconnaissance, of necessity, take place in a locality which,

through the nature of its terrain, does not admit of deviation from the ordinary lines of communication—such as is found in Karst or along the Italian border—the cavalry will find it necessary, not only to use the carbine, but to employ machine guns and artillery as well, in order to accomplish its objects.

In order, therefore, to achieve satisfactory results in our system of information and reconnaissance it will be necessary, in the circumstances just stated, to work with detachments strong in fire action; detachments that, by virtue of their carbines and machine guns, possess the means for the accomplishment of their purposes.

The addition of artillery to cavalry, heretofore mentioned, has proven itself to be feasible and extremely useful, not only to assist in cavalry engagements, but at other times. Thus, after the crossing of the Yalu by the First Japanese Army, General Mischtschenko used his artillery to good advantage in reconnaissances in force and ascribes the good results obtained by these reconnaissances largely to the presence of the artillery. Later, in the early part of June, as he was retreating to the passes of the mountains before a powerful Japanese force, it was again his artillery which rendered a leisurely retreat possible by constantly forcing the enemy to deploy.

The addition of batteries or larger bodies of artillery to brigades or even smaller forces, active in the service of information or reconnaissance, will do much to aid in and simplify their problem and expedite the obtaining of results. The repelling power of artillery fire will be of immense advantage in covering the retreat of a reconnoitering force.

If we accept the idea that accurate information can frequently be gained only by a determined fire action, and that it will many times be necessary to concentrate a preponderance of fire at a given point in order to penetrate a well-posted covering line, then the value of attaching machine guns to cavalry detachments engaged in the service of information must be admitted. That the Russians keenly appreciated their shortcomings in this respect is proven by the fact that, at the beginning of the war, there were no machine guns at all attached to their

cavalry, while at its close there were 16 machine gun detachments, of from 2 to 6 guns each, serving with cavalry.

A further argument for increasing the firing strength of reconnoitering cavalry by the addition of machine guns is found in the economy that is demanded in the use of cavalry. The number and strength of cavalry detachments is limited by the number of cavalrymen available, and this number will dwindle with remarkable rapidity during the progress of a campaign, for the duties of cavalry are many and exhausting. Mischtschenko's brigade, for instance, was compelled to go into cantonment for fourteen days, as early as August, 1904, in order to allow men and horses to recuperate. Remenkampf's cavalry division, at the same time, had been reduced to half its former strength. Such examples demand eloquently not only economy in the employment of cavalry, but the increase of cavalry effectiveness by the use of machine guns.

It is not within the province of my article to pursue this subject in greater detail. But I do desire to further emphasize one feature—the lack of unity and continuity, on part of the Russians, in their service of information, particularly during the early stages of the war.

For example, in the first engagement of the war, at Anju on March 28, 1904, when Mischtschenko's Cossacks were compelled to retreat before Kuroki's advance cavalry, the entire Cossack brigade retreated without a halt to the north side of the Valu, and without maintaining touch with the enemy.

Later, General Rennenkampf established his headquarters at Saimachi for the purpose of covering and reconnoitering the country as far south as Fenghuangcheng and west to Kuoyatsun. His force consisted of three battalions, twenty squadrons and fourteen guns. It may be stated that, in general, the behavior of this force was characterized by a series of unimportant offensive movements, which, upon being repulsed, promptly resulted in a total and complete withdrawal to the base of operations—Saimachi.

That persistent, never-ceasing observance of the enemy, that watchfulness, which, once having located the enemy, never

permits him for a moment to escape from view, is not apparent until much later in the campaign—and then not always. What an unfortunate influence this badly controlled and poorly conducted system of information had upon the decisions of the Russian commander-in-chief is sufficiently well known.

Such lack of skill in the proper employment of cavalry may be ascribed to two causes:

- 1. Insufficient instruction in time of peace.
- 2. The powerful impression, amounting at times to despondency, produced upon troops by fire-action commenced without skill and continued with misfortune.

It is hardly necessary for me to state that thorough instruction in time of peace, instruction whose sole object is the preparation of troops for performing their proper functions in war, will save an army many bitter lessons when war actually comes. To further emphasize this fact would be a sheer waste of words. Now for the second cause. We observe in the various engagements of Rennenkampf's forces, in the vicinity of Saimachi, that reconnoitering parties, sometimes consisting of several squadrons, unprotected by covering detachments, are surprised and fired on by Japanese. This occurs, not once, but many times. As a result of the surprise and consequent confusion and a lack of understanding of the employment of fire action, such parties would find themselves in an extremely tight place, from which they could extricate themselves only by a hurried retreat, which usually terminated at the point from which the movement was initiated.

The circumstances are very different when a cavalry detachment understands how to maintain a fire action. A proper disposition of troops and proper orders will protect the detachment from surprise, enable it to use its firearms to the best advantage, and remove the depressing conviction that cavalry, when opposed to unbroken infantry, possesses but one resource—a rapid retreat.

There are many instances to prove that Russian cavalry, when properly led, is able to maintain a fire action

In view of the fact that any cavalry reconnoitering de-

tachment may be forced into a situation whereby it can secure the information sought only by a resort to the carbine, it is essential that every such commander should possess a proper appreciation and understanding of the manner and method of conducting a fire action. A lack of such knowledge will certainly result in useless bloodshed and in failure in the work of reconnaissance.

In the unusual warfare which characterized this campaign we note that the movements of portions of the army in rear were usually sufficiently screened by a strongly posted front, by inaccessible terrain on the flanks, etc. Nevertheless we find two characteristic examples of the use of the cavalry screen—at the Yalu and in front of Wafangou.

Before the crossing of the Yalu by Kuroki's army, the Eastern detachment of the Russian cavalry under command of General Sassulitch, of which Mischtschenko's brigade formed a part, was stationed on the west banks of the Yalu and Ai rivers to the north of Antung. To the south of Antung, and as far as the mouth of the Yalu, two regiments of Mischtschenko's Cossacks so thoroughly covered the country that not a single Japanese patrol—according to their own reports—was able to penetrate their territory. I have no desire to discuss, at this time, the question as to whether or not the force was employed in accordance with the requirements of the situation, but merely to point this out as an instance of a skillfully planned and well-conducted screen; a screen with one flank resting on an obstacle.

Whether the Russian cavalry might not have been better employed in an intense, active reconnaissance of the Japanese army during the ten-day march of the latter from Anju to Wiju and again during their ten-day stay at Wiju is another matter.

To be sure, a screen when aided by only a small obstacle, such as is furnished by the Yalu below the mouth of the Ai river, and when consisting of a numerically inferior force, can hardly hope to be invulnerable. But even though scouts or reconnoitering parties coming from the enemy should find it

possible to penetrate the line without detection, a proper vigilance will prevent their return.

That the maintenance of a successful screen, without the aid of some important natural obstacle, is an extremely difficult matter is amply proven by the measures adopted at Wafangou, where the number of Russian troops thus employed was excessively great and no results were obtained. In the latter part of May the Japanese Second Army (General Oku) had been maneuvered to a point north of Kinchou with the intention of proceeding against General Stachelberg's corps. For the purpose of reconnaissance and in order to screen their own movements, the Japanese, already weak in cavalry, had detached Genral Akijama's cavalry brigade, consisting of 8 squadrons and 2 machine gun detachments (to which had been added 2 battalions), with orders to push northward. On the Russian side General Samsonoff, with 13 squadrons, 3 company Frontier Guards and 1 battery, had been ordered to proceed toward Wafangou for the same purpose. These dispositions resulted in the engagement at Sungchiatun (south of Wafangou) on May 30. In the effort to screen its own army Samsonoff's force, during the early part of June, was being constantly increased. Stachelberg's corps originally consisted of 351 battalions, 19 squadrons and 11 batteries. On the 10th of June 6 battalions, 16 squadrons and 2 batteries were in the screen and scattered along a front 30 kilometers in length, with headquarters at Wafangtien. And despite the fact that all avenues of approach were closely guarded by this force, the Japanese succeeded, by massing a local superiority of troops, in breaking through the screen wherever they wished and securing information. In these reconnoitering engagements, which frequently assumed the nature of a surprise, the carbine naturally played an important part.

The advance of Oku's army, on June 13, led, as is known, to the battle of Wafangou (Telissu).

Two Japanese divisions stood opposed to the front of the Russian position at Wafangou. This Russian front was about 7 to 8 kilometers in length and facing south, in a general direc-

tion. One Japanese division was far to the west and Akijama's cavalry brigade had been pushed far to the east. Thus we observe that on the evening of the 14th there were two Japanese divisions in the immediate front of the enemy, and two strong forces, one on the right and one on the left, each distant about two miles, and each prepared, in the event of insufficient reconnaissance on part of the enemy, to fall with tremendous effect upon the enemy's flank at any time during the battle.

Without going further into the interesting details of this battle, I will state that the employment of the Japanese cavalry brigade as a fighting force in this action cannot be too highly commended, as it is typical of the manner in which large bodies of cavalry will be utilized in the engagements of future wars.

With the increasing perfection of firearms the vulnera-Lility of the flanks and rear of a position has correspondingly increased. If either flanks or rear are menaced and the enemy cannot be met with an equivalent volume of fire, the fate of those thus threatened is usually decided. At the battle of the Yalu the most courageous frontal combat was paralyzed, on the Russian left wing, when weak Japanese flanking detachments were observed making their way around the Russian left. At Kinchou the Russian troops had defended their position at Nanshan with the utmost obstinacy until they saw that the Japanese had surrounded their left so far as to practically turn the position. Everywhere—at Wafangou, at Mukden—we see the same maneuvers produce the same results; an arduous, destructive, often unsuccessful, frontal fight changed to a favorable issue by threatening the enemy's flank. The success attending these flank movements will be in proportion to the degree of surprise that attends their execution. When the enemy's surprise is complete no counter measures can be adopted.

Cavalry, in large bodies, appears to have been predestined for just such movements as these. In battles of the future cavalry will be employed in large masses, in divisions, liberally assisted by machine guns and horse artillery. It will be commanded by leaders who combine, with cavalry dash and enterprise, clear, cool judgment and appreciation of the possibilities of a situation, and that decision of character which will impel them, whether mounted or dismounted, to strike the enemy at decisive points with sacrifice, if necessary, of the entire command. Thus utilized, the cavalry of the future will achieve an importance and a position it has not had since its most glorious days.

Whether the employment of Akijama's cavalry brigade was actually planned in this manner by the Japanese authorities is unknown to the author. But its location and movements at the battle of Wafangou would indicate as much. To be sure the brigade, on account of its numerical weakness and lack of artillery, could not gain a decisive success. It consisted of but 8 squadrons and 2 machine gun detachments, and was compelled to operate in the comparatively inaccessible mountainous region southeast of Wafangou.

When the battle opened, on the morning of June 15th, the brigade marched to the battlefield guided by the thunder of the guns. It arrived about noon, just in time to save the sorely pressed Japanese right wing. The Japanese had reinforced their right with every man that could possibly be spared. One squadron of the divisional cavalry had charged without success, dismounted to fight on foot, and was at the time in an extremely tight place. Suddenly Akijama's brigade appeared and produced a complete change in the situation. The brigade dismounted to fight on foot and immediately attacked, vigorcusly assisted by its machine guns. Too weak, numerically, to assume a far-reaching offensive, it nevertheless succeeded in holding the Russians to the ground they then occupied. Shortly afterwards the battle was decided by the Russians giving way before the Japanese left flank. In the Russian retreat, following this battle, Akijama's brigade was most energetic in crowding the Russian rear guard, driving it cut of position after position.

How different would have been the situation of the Russian left flank if it had been attacked by a large force of cav-

alry, augmented by artillery, instead of by Akijama's weak brigade.

If large bodies of cavalry can be used offensively, to surprise and attack the enemy in flank or rear, they can be used to equal advantage in and by the defense. When, for instance, a flanking movement, by an attacking force, has progressed too far, before being discovered, for infantry to reach the threatened point in time to repel the attack, cayalry may, by virtue of its superior mobility, be rushed to the point of attack to repulse or at least check or delay him. The conduct of the Russian cavalry at the battle of Wafangou is instructive in this respect—unfortunately in a negative way. The mass of the Russian cavalry—Lieutenant General Simonoff's combined division-had been advanced southward to screen and secure the army. After it had been pushed back it was located on the right flank of the Russian position, at Lungkao. The division had reached this position about 10 a. m. of June 14th, under the following orders: "After passing Tafangshan, to occupy a position west of that point, protect the right flank of the corps and observe all roads and valleys in the district Tafangshan-Nengetun (10 kilometers southwest of Tafangshan)-Wuchiatun (10 kilometers northwest of Tafangshan)." In the event of encountering a superior force the division was to retreat via Lungkao.

During the forenoon of the same day (June 14th) an entire Japanese division (the 4th) marched past the front of this position, a scant 15 kilometers to the south, reached the vicinity of Satchodsi at noon and camped there for the night. But no notification of the presence of this strong force on his right flank reached the Russian corps commander until the morning of the 15th.* The distance from Satchodsi to Lungkao is 14 kilometers, and from Lungkao to Wafangou 6 kilometers—total distance 20 kilometers (about 12½ miles).

Quite in keeping with this is the subsequent conduct of this Russian cavalry division. When the Japanese 4th Division

^{*}The first message was dispatched from Lungkao at 6 a. m. and reached the corps commander at 11 a. m.

attacked the Russian position, during the early morning hours of the 15th, the Russian corps commander naturally expected that the cavalry division would deploy on the heights, north of Lungkao, to oppose the enemy. Not at all. The Russian cavalry retreated without making any resistance worthy of the name.

The failure in the work of reconnaissance manifested here by the Russians, and their subsequent behavior, can readily be ascribed to three causes:

- 1. When the Russian advance guard retreated, on the 14th, the continuity of their reconnaissance was lost. They absolutely lost touch with the enemy. Thus it was a simple matter for an entire hostile division to march unnoticed and unopposed into the district which they were supposed to guard.
- 2. It is impossible, at least so far as is now known, to acquit the corps commander of the charge that he did not make clear to his division commander what was expected of the latter. The district assigned to the cavalry commander, for reconnaissance, was so small that the line of march of the Japanese division was beyond its boundaries. If the command from corps headquarters had been, "the cavalry division will protect the right flank of the corps; it will reconnoiter all hostile movements and repel, or at least retard, any possible operations directed against the right flank," it is reasonable to presume that the reconnaissance would have been more extended and that the cavalry division would have taken advantage of the many opportunities offered by the broken terrain to retard, for hours, the advance of the Japanese 4th Division.
- 3. The narrow construction placed upon what was manifestly his duty by the cavalry commander. Had he possessed a larger conception of the problem before him he would not have yielded such a slavish obedience to the letter of his orders.

It would be unjust not to mention, at this time, that the Russian cavalry has, on other occasions during this campaign, rendered the most conspicuous and gallant service. Rennen-lampf, for instance, at the battle of the Sha river, at Mukden, and during the later phases of the campaign, has made his name

and that of his brave Cossacks renowned far beyond the borders of his own country. And the behavior of Mischtschenko's cavalry corps, when the Second Manchurian Army assumed the offensive against Sandepu (January 24th to February 4th, 1905), may be pointed out as a model of an energetic action of a large cavalry force making an unexpected attack against the flank and rear of an enemy. That the attack was unsuccessful was due to causes not connected with the cavalry. I will therefore not discuss them in this article.

The action of the Russian cavalry, on the left flank, at the battle of Mukden, is very similar to its behavior at Wafangou. At the time of the battle of Mukden the Russians controlled about 180 squadrons. Subtracting from this enormous mass a liberal number, for allotment to the various army corps, it would have been entirely practicable to assemble on the left flank—where the terrain was strongly favorable to the use of cavalry—at least 120 squadrons. As a matter of fact Mischtschenko occupied this flank with abour 80 squadrons.

The events that occurred are so well known that it is unnecessary to go into them in detail. Nor do I wish to speak of the entirely insufficient reconnaissance on the right flank. I only desire to point out that Mischtschenko's force—and it represented at least 8000 carbines and 20 batteries—was not utilized to oppose an effective resistance to the surrounding, by the Japanese, of the Russian left flank; and to invite consideration of the results that would have been achieved if the entire mass of available Russian cavalry—120 squadrons (at least 12,000 carbines, a large number of machine guns and about 20 or 30 batteries)—had attacked the exhausted and worn-out army of General Nogi, before it could have made itself felt on the battlefield of Mukden.

While the thought that cavalry will no longer be able to win its battles with the saber alone is a rather sad one to the cavalryman, we are forced to the conclusion, by a consideration of the engagements mentioned, that a decisive victory could, in the majority of cases, only have been achieved by the aid of the carbine. A certain courage is still required to make such an

avowal. The facts, however, cannot be denied. But let no man believe that a resort to the carbine by cavalry will be the death-blow to cavalry dash and enterprise. Quite the contrary. The charge will clear the way to the enemy's most vulnerable point, a point guarded perhaps by hostile cavalry. The charge must not represent the object or end to be attained, but merely the means for attaining the end. And when further advance with the saber is impossible, then, under skillful guidance, with the carbine, fighting the enemy until victory or annihilation results.

Closely connected with the functions of cavalry during a battle are the duties allotted to it in the pursuit of the enemy after a victory or in retarding his pursuit after a defeat. There are numerous examples to illustrate such employment, but their

discussion is not within the province of this article.

No statement concerning the employment of cavalry during the late war would be complete without the mention of the valuable service rendered by it in the lesser warfare which was conducted, particularly on part of the Russians, with an enterprise and daring suggestive of the days of Nadasdy, Trenck and Hadik. The war spirit that animated the cavalry is best shown by the unbroken series of brilliant undertakings, during the various cessations of operations, and found its climax in the great raids of Madritoff in Korea and Mischtschenko and others in Manchuria. Such events as these are sufficient to convince the most skeptical observer that cavalry does not necessarily sacrifice dash, spirit and enterprise because it does much of its work with the carbine.

The value of these undertakings must not be underrated. Their total results represent a great material success. But greater than this consideration is the influence exerted by them upon the spirit of their own troops and upon the morale of the enemy.

As examples, I shall select at random, from among a number of such incidents, a few, to show what the Russian cavalry accomplished between the time of the battle of Liaoyang and the battle of the Sha river, that is, in the latter half of September, 1904:

Night of September 17. A Russian detachment bombards the railroad station Yentai with 3 guns.

September 17. Extended and successful reconnaissance by portions of Rennenkampf's and Samsonoff's cavalry divisions.

September 25. A Japanese detachment of 1 battalion and 2 squadrons, having advanced between the Mandarin Road and Tumintsi, is forced to retire by Russian cavalry.

September 26 and 28. Siberian Cossacks capture Japanese trains of beef cattle. Ural Cossacks surprise and attack a Japanese bivouac. Orenburg Cossacks decoy half a squadron of Japanese cavalry into an ambush.

September 28. Engagement between Russian cavalry and a Japanese detachment consisting of 1 company, 2 squadrons and 4 guns.

September 29. At the center of the line, a Japanese outpost of 1 company is dispersed by Russian cavalry: the Russian artillery with this detachment compels the Japanese to vacate the adjoining heights.

September 30. Russian cavalry advances along the right bank of the Hun river as far as Changtan, drives out the Japanese garrison and burns 17 lighters, of which some were loaded with ammunition.

Thus the reports of the operations of the lesser warfare continue. A world of heroism, courage, enterprise and material and moral success is contained in these incidents, thus briefly recounted.

The great raids were conducted on a vastly larger scale, both of men and materials. Thus, in his well-known first raid toward Newchwang-Inkou, Mischtschenko commanded 36 squadrons and 24 guns. In the third of these great raids, in the latter part of February, 1905, 80 squadrons were employed. In his last raid, in May, 1905, Mischtschenko had with him 50 squadrons and 12 guns. The object of this last raid was to secure information as to the Japanese dispositions in front of the Russian right flank. During this expedition one large clothing depot was burned, a detachment of the 7th Division hospital was captured, large sections of the Japanese telegraph were

destroyed and a number of bands of Chunchuses were scattered. The raiding force attacked the Japanese lines of communication and engaged the 49th Japanese Infantry Regiment, whose duty it was to guard their lines from Mukden to Chifutsi. The Cossacks attacked the Japanese, who occupied a fortified position, and, assisted by their artillery, routed them completely. Some Japanese companies were totally destroyed, others captured. During the subsequent progress of the raid a provision column was captured and the Japanese telegraphic communications destroyed in many places along their rear.

This raid resulted in establishing positively the positions of three field divisions of Nogi's army,

Losses of the Russians—Killed, 2 officers and 34 men; wounded, 9 officers and 140 men.

Losses of the Japanese—About 500 men, among which were 6 officers and 234 men captured.

Captured by the Russians, among other things—2 machine guns, 20 carts, 150 or 200 horses.

And all this was accomplished by the cavalry of an army which for almost a year had been persistently unfortunate in all its battles. It is not surprising that such a series of daring cavalry ventures should produce, as they did, a deep impression upon the Japanese army—and in Tokio as well.

It is hardly necessary to mention that, during the operations of this lesser warfare, the cavalry, time after time, encountered resistance which could not have been overcome by a charge; resistance, to overcome which, the use of the carbine was absolutely essential.

I have endeavored, in this article, to point out, in a general way, the various activities of the cavalry arm, and believe that we may now deduce from the subject matter the answers to the questions propounded at the beginning of my paper.

The cavalry of the future, when properly instructed, organized and employed, will not only be able to maintain its present position among the various arms of the service, but will be of greater assistance before, during and after a battle than heretofore.

Cavalry is indispensable in reconnaissance, despite spics, telegraph, balloons and other sources of information, and more important than ever in screening and securing an army during a campaign. Under competent leaders it will achieve an importance, as a fighting arm, never equaled since the days of Frederick the Great.

It is self-evident that an instrument, in order to respond to such high demands, must have reached the highest point of perfection; and I present herewith the most important practical applications, the most impressive deductions, that can be drawn from the use and employment of the cavalry during the late war:

From a careful, conscientious study of the cavalry engagements of this war and a consideration of certain, constantly recurring phenomena peculiar to each, one is forced to the conclusion that cavalry must not only be able to ride well and charge, but to fight with the carbine equally well.

Beginning with the reconnoitering patrol, which will, of necessity, be forced to have frequent recourse to the carbine, through all phases of modern war, to the unexpected, decisive attack of large, well-organized bodies of cavalry for the purpose of rolling up a hostile flank, we are everywhere confronted with the absolute necessity of having a cavalry that knows how to shoot.

The demands now made upon cavalry as to horsemanship and maneuver ability can certainly not become less; for the solution of the problems which now fall to that arm, in the covering of long distances in difficult terrain, in clever maneuvering in such terrain, and in repulsing a hostile cavalry, require as high a degree of mounted training as has been demanded in the past.

The ruling spirits of this knightly arm must therefore confess, freely and openly, that the former glory of the cavalry can no longer be maintained with the saber alone, but that the carbine will, in future operations, play an equally important part.

Cavalry of today should be trained in the covering of great

distances and in maneuvering in every kind of terrain that is possible for horses; it should be determined to achieve success, without fear of either hostile cavalry or infantry; animated with the unflinching resolve to sacrifice itself to the last man, if the results are sufficiently important to warrant such action; and so instructed and led as to fight equally well mounted or dismounted, giving the preference to that method of fighting which promises the best results. Such is the goal of cavalry. And with such a force our arm will receive a greater esteem and admiration than ever before and will hold within its grasp the means of deciding the fate of battles.

TRANSLATOR'S NOTE.—This article emphasizes the necessity of proper instruction, for cavalry, in the use of the carbine. 'It is a plea for a better knowledge and a more intelligent conception of the advantages of dismounted fire action. In this respect it teaches us little. Since the days of the Civil War, when dismounted fire action so frequently and effectively established its necessity to the cavalryman, it has and wisely, as is now agdin demonstrated, never lost its importance in our regulations. It would seem therefore that, in this respect at least, European cavalry is today aspiring to a stage of development which we have already attained.

JUMPING AT THE HORSE SHOW.

From the Spectator.

The best day at the International Horse Show must of necessity be the day on which the King and Queen come with their grandchildren to see the competition for the gold Challenge Cup presented by the King himself. It is open to officers of all nationalities, and each year the competition improves. This year there were six teams entered, of three officers apiece, from the Argentine, Canada, Belgium, France, Italy and England, and, perhaps unexpectedly for those critics who had apparently made up their minds that English officers would not be able to hold their own against officers trained in foreign riding-schools, there was a very close competition, which resulted in the English team being placed third, with the French and Italian teams first and second, and the Canadian, Belgian and Argentine teams coming after the English. It was an English horse, too, which had the best individual record, and an English officer who showed the best riding of the day. "Luxury," the horse, is a chestnut gelding, aged; his round was practically faultless, and he was beautifully ridden by Mr. Malise Graham, of the 16th Lancers.

The jumping in the King's Cup competition was particularly interesting, for it followed a rather curious display of failure by one of the hunter classes. Many of the horses should be as well used to the show ring as the hunting field; but horse after horse failed to make anything of a not very exacting jump over rails. They managed other jumps as high, but nobody got over this jump until one of the judges pointed out that the sun shining through the blinds over the glass roof put a patch of blazing white on one side of the rails, while the other side was in shadow. The rails were moved, and the very next horse cleared them. As they were placed before, they were unlike anything a horse would see in the hunting field, and the horses seemed to decide that it was not worth trying to understand the jump. Once or twice the riders were balked by the spectators; it is odd that people who come to a horse show should forget that a horse can be "put off" as easily as a man. Once, as a horse was being put at the rails,

a lady in a white dress jumped up almost under his nose; the horse, a clever gray, hesitated, had a good look at her, and then went over. But, taken as a whole, the jumping of the hunters in this competition was disappointing; it would not have prepared a casual visitor for the jumping of the afternoon.

In the naval and military tournament you may get something of the thrill that belongs to the lists of the Middle Ages; some of the contests have come down from those days to these. But you come nearest to the real spirit of the tournament, surely, on the day when the officers' teams ride for the King's Cup. There is the extra touch of pageantry in the parade of the officers in their brilliant uniforms; the King and Queen are enthroned in a gallery, there are great doors opening into the arena, the lists are open to soldiers all over the world, the competitors ride in at a call on the horn. The jumps, perhaps, would have been a little too much for Richard L's horses; we have taken many years to breed our hunters and chargers into the animals we have today. The jumps were certainly a severe test. They were nine in all, but three were to be jumped twice, and two were almost double jumps. First came a hurdle, brushed up to five feet; then three rails sloped, the top rail four feet six inches; third, railway sleepers on end, four feet six inches; fourth, a wattle fence, four feet six inches; fifth, two field guns placed muzzle to muzzle; sixth, a gate, four feet six inches. Then the first three fences had to be taken again, and then the rider turned and took his borse down the center of the arena, first over four feet of water on to a ramp, and from the ramp over a three-foot wall with a five-foot drop the other side; next, he had to take his horse at a line of dummy soldiers, and after the soldiers to ride up and down a bank and over a fence the other side—the last a very good test of a confident jumper. One of the jumps, the line of soldiers, was a complete failure. Nobody got over it, though one of the French officers succeeded in only knocking off a head and body. The line was of dummy Grenadiers in scarlet, with bearskins, and they came to pieces, if they were touched, at the neck and waist, and then rolled everywhere over the floor, to the great delight of all the children. But it was not serious jumping. horses simply did not understand what they had to do. riders tried with whip and spur-sometimes the only time the

whip was raised in the round—to get them to rise at the line, but the result was always the same. It was amusing, if it was a little irritating, to watch the way the horses came up to the line. The animal dropped down the five feet over the stone wall, and then suddenly became the live embodiment of a question and a protest. "What is this? A line of soldiers—and yet they are not exactly soldiers? What am I to do? He can't mean me to jump over soldiers? Twe never done such a thing. Perhaps he means me to knock them over. Well, here goes," and there they went, all over the floor. Then the obedient creature took his last fence, a real one, and cantered out.

Probably the Italians were expected to win, and, as it was, they were only three points behind the French team, which is a very small margin of difference after three rounds with thirty-six jumps. But the French were doubtless the better team, and one officer in particular, Captain Cariou, instructor of equitation at the Ecole d'Application, Fontainebleau, gave a wonderful exhibition of riding. The pity was, with so good an entry from the Continent, that there was not a team of German cavalry officers in the competition; it would have been interesting to compare the different schools of riding, as well as pleasant to welcome a team from a neighbor. As it was, the differences between the styles of the different nations were sufficiently marked. It would be absurd to speak of some of the riding expected at the Horse Show as circus riding, but there seems to be a tendency to what may be called trick riding, and it was when the horses were called upon for something like trick jumping that the differences in the schools came out. It was just this that made the riding of Mr. Graham on "Luxury" so noticeable. At a horse show one is usually unlucky enough to sit within range of some critic who declares, for all to hear, that none of the competitors can ride at all, and that if he could not ride better than they, he would not show his face in the ring; but even this ubiquitous critic was silent when Mr. Graham was making his round. What the critic notices is certainly not bad riding; if he gave himself a little time for consideration he would remember that these teams are three riders picked out of an army. But in a cramped space, with very short intervals between the jumps, it is difficult for a rider, even with a perfect command of his horse, to give the appear574

ance of really sitting down in his saddle, and some of the foreign schools do not seem to aim at giving that appearance at all. But Mr. Graham's riding was distinct from the foreign schools; he was essentially English. He sat his horse like a hunting man. and, though he went fast at his fences, and as if both he and his horse meant jumping, he always looked as if he had more time than the others between the jumps. If his style of riding can be summed up, he looked, as did the other English officers in the competition, as if he would beat the foreign officers across country. Could an English cavalry officer, so far as mere riding is concerned, be paid a better compliment? It is just the possibility of paying that compliment which makes us a little doubtful as to the value of a rumored innovation on the part of the Army Council as regards jumping competitions. Hitherto our officers have had no special training in what we may call trick riding; but if the rumor which has been circulated is true, there will be in future special horses selected as performers at horse shows, and there will be officers specially selected to ride them, and to be sent to various competitions during the year to become masters of the art of jumping in the ring. This may possibly be necessary if an English team is to win the King's Challenge Cup, given that the competition for the cup consists partly of trick jumping, for instance, over dummy Grenadiers. But it is of less value as military training. The real test, surely, between teams of officers should be the cross-country test, say from steeple to steeple in the old-fashioned way; at all events, over unknown country with unexpected jumps, and all sorts of going, grass and plow, and hill and flat, in between. That may be an international competition impossible to arrange, and the jumping competition doubtless is far more convenient in many ways. But the steeplechase, or some form of it, is the real test. It is the test which, in this country at all events, officers choose for themselves.

AIRSHIPS IN WAR.*

By V. STOCKHAUSEN, CAPTAIN AND ADJUTANT OF THE BERLIN GARRISON.

According to our opinion, the following duties will fall to the lot of airships, viz:

- 1. Reconnaissance:
- 2. Transportation of persons and supplies;
- 3. Carrying messages to and from invested fortresses;
- 4. Firing or dropping explosives;
- 5. Attacking hostile airships.

In their reconnoitering duties we must make a distinction between tactical and strategical reconnaissance.

There is no doubt but what the airship is far superior to the captive balloon in the matter of tactical reconnaissance. The ability to quickly change its station, to ascend higher than the captive balloon, to seek favorable light for observation, to observe the enemy from the rear and thereby gain information regarding the position of his reserves, his preparations for enveloping movements, the arrival of reinforcements, the position and location of his cavalry divisions, the position of hidden batteries—all these are invaluable advantages. And even if, on account of its size, the airship offers a larger target than the captive balloon, its vertical and horizontal mobility offers an excellent protection against hostile artillery projectiles, which is another advantage it has over the captive balloon.

For the present, however, the captive balloon has the advantage over the airship in being in close communication with the supreme commander. The information officer on duty at head-quarters is charged with keeping the balloon detachment informed of all important reports which are received at headquarters. By means of the telephone the contents of all reports received or changes in the intentions or desires of the supreme commander can quickly be communicated to the observation officer, or the latter can inquire in writing or verbally ask for information, and

^{*}Translated from "Militar Wochenblatt." August 17, 1909, by Harry Bell, Master Signal Electrician, Army Service Schools.

his reports are quickly and correctly transmitted. Although we may assume that through wireless telegraphy we will have better communication with headquarters, it will be some time yet before we can count on receiving written reports accompanied by a map or sketch from an airship by that means.

Despite all advantages the airship has over the captive balloon in regard to tactical reconnaissance, we cannot yet do without the latter as an auxiliary means of reconnaissance. The captive balloon will, in spite of adverse criticism, prove its usefulness in actual war. That the Russian captive balloons are said to have performed but little service in the Russo-Japanese War is immaterial; the best Krupp gun in hands of inexperienced men is less valuable than a stone throwing machine of the Middle Ages.

The airship is of the utmost importance in strategical reconnaissance. Its efficiency, however, is dependent on its construction, on wind and weather, on the quality of its material, on proper navigation and efficiency of the observing officer. The least which we ought to expect of it is the reconnaissance of a sector of the terrain such as is usually assigned to a cavalry division; but, as a rule, the balloon may perform better service in that line.

The trials of the airships of all systems conclusively prove, as far as construction and material is concerned, that we are ahead of all other nations. That we will not remain stationary in our experiments is assured by the personality of Count Zeppelin, Majors Parseval, Gross and Sperling on the one hand, and the untiring energy of the officers of our airship battalion on the other. Anyone who has followed the growth of that battalion for the past 25 years can hardly doubt that its zeal and devotion to duty, through which it has in so short a time gained such an enormous importance in our army, will also in future be the guiding star for its officers' corps and men.

Concerning the point mentioned above, "efficiency of the observing officers," we must own to some doubts. For intelligent observation from the captive balloon practice and tactical knowledge very often are not all that is needed; for observation from dirigible airships a thorough tactical education is absolutely necessary, and only that officer who has been with the general staff

for years possesses this requirement. The old general staff officer will have a far different conception of the advance of an army from that of a young lieutenant just detailed for duty with the airship battalion.

The results of reconnaissance of a cavalry division are, as a rule, the sum of individual reports of specially selected officers: should one of them fail, the experienced division commander can still form a true picture of the situation from the reports of the others: he can later on correct the sins of omission, etc. On his ability to correctly place his units, to use them, to supplement them, etc., depends whether or not the cavalry division amounts to anything. Conditions are different with the airship; in larger reconnaissances it is impossible to say in advance what the airship may see. Even if the observation officer receives a general task in outline, he will very soon have to decide of his own accord where he ought to go, what he believes to be his duty to ascertain, when he will halt, when advance. For this a clear, resolute head is required, one which will not confound minor or unimportant with material and important things. An airship officer has a very important duty to fulfill in connection with navigation, which fully occupies his mind; therefore the tactician, and not the navigator, should be charged with responsibility of observation.

It may be the intention to occasionally detail general staff officers to conduct important reconnaissances. To this we must object, and all experienced air navigators will uphold us, that it is not sufficient to have a clear head and be a good observer on terra firma to be able to at once take observations from an airship, for practical experience is essential to gain perfection in this as in everything else. We should not be led astray by socalled practical experiences, which we believe we have gained in a ride in a captive balloon or in a free balloon or dirigible airship. Even if we were well pleased and satisfied with ourselves, a competent and experienced critic would think different. In trial trips in balloons or airships we are very apt to forget that we, as a rule, occupy ourselves with objects which are but two or three kilometers distant and for the rest merely admire the distant view. As a matter of fact, correct observation from an airship commences only at five kilometers distance. The eve must be trained

to accustom itself to the changed form of objects; just consider how different objects appear when viewed horizontally and when viewed from an elevation, as, for instance, from a spire or high building.

If we desire, in war, to receive useful, extensive and correct reports from an airship, we should lose no time in establishing regular courses in observation for the older general staff officers. No matter how desirable it may appear to the commander to himself ascend during a battle for the purpose of personal observation, he should never do so, for in most cases such a procedure would have bad consequences.

To guard against being misunderstood, we will here specially emphasize the fact that the airship can never replace our large bodies of reconnoitering cavalry. Storm, fog, snow, rain and thunderstorms are enemies which human intelligence can defeat or battle with to a certain extent, but man will never become master of the elements. We can be glad that in the new airships we have gained a new organ for the important near and far reconnaissance, but that should not induce us, for the sake of parsimony, to abolish or limit our present efficient reconnoitering organs.

Let us now examine the second point—the transport of persons and stores. We may assume that in future there will not be much change in transportation of persons different from the present method. There will, however, arise cases where the airship will be of great help; for instance, when the question is of carrying single persons across stretches of country which have not as yet been cleared of the enemy, or across streams, deltas, large lakes, etc. But in fortress warfare the airship will be of the most value. In case of an invested fortress it is of the utmost importance to keep up communication with the outside. The arrival of an energetic and well-known personage may infuse the garrison with new life and spirit. If such a personage had arrived in Port Arthur by means of an airship it may well be assumed that that fortress might have held out longer than it did and that the outcome of the battle of Mukden might consequently have been different. The advantage the airship has over the old style balloon in the matter of transporting persons is self-evident. But only in very exceptional cases, I believe, will the airship be

utilized to transport stores—that is, rations and ammunition. To carry rations to an invested fortress is possible theoretically; provided only that the investing army or that the hostile fleet of airships has been placed *hors de combat* or annihilated, for it will take very many trips for an airship to carry sufficient supplies to an exhausted fortress. However, the smuggling into the fortress of medicines, tobacco, fresh vegetables, etc., may be of the utmost importance to the population and to the garrison. For the present it appears improbable that airships will be able to carry artillery ammunition.

The importance of keeping up a good message service from and to an invested fortress is generally known; every new addition to that service should be welcomed.

We will now examine more closely the fourth point—firing or dropping projectiles. I fear that my views may not be acceptable to everybody, but this must not keep me from expressing them. The firing or dropping of explosive shells will undoubtedly play a great role in future wars. The French have long since come to the conviction that great advantages lie herein. After the expiration of the time limit of the article of The Hague Convention prohibiting the throwing of explosives from balloons, the French government declared that it would not renew its ratification of that article. This shows beyond doubt that it has no intention to allow itself to be governed by a false feeling of humanity, but rather intends to utilize all technical means available. We can not see why it should be permissible to employ a submarine or a torpedo boat, the projectiles of which will sink a battleship with thousands of lives on board, and prohibit the firing or dropping of explosive shells from airships or balloons. It is very probable that the main factor in prohibiting the latter was ignorance of the means of protection against it. Is there any difference whether we are killed by a shell fired from a mortar and falling from above on us or by a shell dropped or fired out of an airship? Is it not more humane to end a war quickly—if it can be done—by dropping shells from airships than to sacrifice thousands and thousands of lives on the battlefield, and have thousands die by epidemics in hospitals consequent upon a protraction of war?

I do not coincide with the opinion that we can hit nothing

from above. I also believe that that professional man was wrong when he said to a supporter of dropping projectiles from an airship: "Place a gold piece on the sidewalk and try and spit on it from a second story window; an airship will have the same chance of hitting what it fires at as you will have hitting the gold piece." To show how learned men can err, I will call attention to a statement made by the well known, celebrated Werner v. Siemens to the effect that there were two problems it would be a waste of time to occupy oneself with, namely, perpetual motion and dirigibility of airships. I also cite the following, although not germane to this subject: On my inquiry where I could attend a lecture treating of the Roentgen rays, the first assistant of a celebrated professor of medicine in Wurzburg told me about a month after Professor Roentgen had published the first of his discoveries that that invention was absolutely valueless, as the camera could never be used to make the invention profitable or useful.

When, how, and against what targets may explosive shells thrown out of airships be most effective? It appears that some military authorities have great expectations of success in a regular firing or dropping of shells on live targets, the projectiles to be about the size of shrapnel. In my opinion, it is wrong to try and compete against artillery; the result will never justify the energy and ammunition expended. Still, single shells dropped on movable targets may, under favorable conditions, be very effective.

Under normal conditions, there will never be any use in dropping shells on a march column. The target is too small and counter measures are easily taken. More success may be expected by dropping shells on troops marching through a defile, especially in mountain passes. And in doing so the object is more to create disturbance and confusion than in making hits.

In order to harass a skirmish line effectively we would have to take a position immediately over it; this would in most cases be impracticable, because our own artillery may be firing on that line, and the hostile infantry would hardly allow the airship to stop unmolested over their heads. In dropping shells from a high altitude, say 1,000 meters, I agree with the opinion expressed of trying to spit on a coin.

Conditions will not differ much in case of smaller bodies in close order, such as companies, troops, etc. On the other hand, or more; we will cause confusion, for the target is broad and close column. In this case we can easily ascend 1,000 meters we may have good success in shelling a cavalry division halted in deep enough. In similar manner the concentrated vehicles of artillery in action are an excellent target. Firing on bivouacs, especially cavalry bivouacs, may often prove very advantageous, not because they are easy targets, but more on account of the moral effect produced and the confusion created by horses becoming unmanageable.

Should there offer no more profitable target, the airship may drop shells on baggage trains and ammunition and supply columns. Firing on general headquarters, army and other headquarters, may be very useful on the battlefield as well as when they are in quarters. In this it is immaterial whether men are hit or not; the main point is to cause confusion, to interrupt the issuing of orders and deprive all of rest.

In fortress warfare the besieged may be injured much by explosives, it is true, but under ordinary circumstances not much damage will result. It will hardly pay to drop shells on living targets; single batteries or armored towers offer targets too small to be successfully damaged from a great height. Our own artillery's fire may not permit the airship to hover over the fortress close enough to drop shells with accuracy. A well navigated airship may, however, before the general bombardment commences, travel low across the works at night and drop a few well directed shells.

The airship may, however, injure the besieged indirectly by destroying or setting fire to buildings in the fortress which can not be reached by the besiegers' guns, such as storehouses, magazines, ammunition depots, factories, water and gas works, etc. In this the airship runs no danger except when approaching and after leaving the fortress; and this danger may be lessened by choosing the night for the exploit.

The conditions are different with the defender. The concentration of men around the fortress, even if not in a continuous circle, is still large enough to make it pay to drop shells occasionally on live targets. The inanimate means of attack—

heavy siege guns—are and always will be the most dangerous for the fortress; these must therefore be fired on by all means. And in this the use of airships will be found of great advantage, because here it is a question of large targets and because, as a general rule, they are hidden from view of the gunners inside the fortress. Very often besiegers and besieged will benefit also by searchlights carried in airships and by aerial photography.

Before we discuss the subject of utilizing airships in naval warfare, we will mention a few targets which so far have not been discussed, but the destruction of which is of great importance. In the first line among these are the bridges over larger streams, either to delay or prevent a hostile advance or to interfere with the enemy's communications to the rear. The thought lies near that our Mosel and Rhine bridges will be visited by French airships immediately on the opening of hostilities. If an airship should be lost in such an undertaking, the loss would be immaterial compared with the result attained in destroying a bridge across the Rhine. Therefore we should take proper measures in time of peace; we should place balloon guns and proper ammunition at suitable points, and that permanently; and should arrange to have experienced men in their vicinity at all times who could quickly and effectively serve these guns. Whether or not these men should be in active service or from the reserves has to be decided by the proper authorities.

No one will doubt but what in war the Krupp establishment would receive an early visit from a fleet of airships. But it is hoped that there, as well as at other important points, timely arrangements will be made for defense and protection against such a fleet. We could easily cite other important points, and no difficulty will be found, either, by anyone to locate equally important points in the enemy's country.

According to my views, we must without fail organize a regular balloon message service if we do not want to encounter uniwelcome experiences. The requirement of the French army authorities that each airship must have a radius of action of at least 500 kilometers leaves no doubt that the authorities there are fully cognizant of the importance of this new arm. This makes it necessary for us to station several airships on the frontier, which can immediately do battle with hostile airships, in addition

to placing balloon guns as above suggested. The fact that several airships have recently been stationed in Cologne shows plainly that our army authorities realize the importance of these requirements.

The airship will undoubtedly play an important role in naval warfare. Its reconnaissance activity, however, we will not discuss here. The proposal to carry small airships on the larger battleships, to be started up on the high sea, seems inadvisable to me. I rather believe that the airship will find its proper employment in coast and harbor defense.

The blockade will undoubtedly be the first means resorted to to stop our commerce; whether or not this can be achieved by the blockade is a different question with which we need not concern ourselves here. It is certain that a blockade can not be kept up all the time with the same ships. The personnel needs rest and coal supplies must be replenished; this means a regular relief of ships similar to that of sentries. The ships will certainly seek the nearest and best anchorages for their rest, and it will then be the task of the airship to seek out these anchorages and try and harass the ships by day and night. In this the dirigible has the advantage, in so far as no balloon guns, as far as known, have yet been invented which can be mounted on a warship, and may have to fear only the fire of machine or rapid fire guns of smaller caliber. But the airship can avoid this danger by utilizing the night and flying at a high altitude.

In order to bombard coast batteries, the warships, when practicable, anchor some distance from the defensive works; the airship, hidden by the powder smoke of the ship's guns, can fly close over the vessels and may successfully discharge torpedoes at them.

The airship may also interfere with landings; that is, by dropping or firing shells, similar to torpedoes, at the anchored transports, on the boats and rafts, in addition to firing shells and shrapnel at the men.

It seems unnecessary to cite more ways of utilizing the airship in naval warfare; it is apparent to everyone that they, under favorable conditions; will be a splendid auxiliary in defending our coast against invasion.

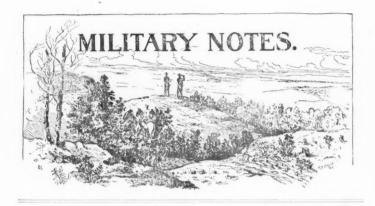
Airships alone will never be able to end a war; they will al-

ways remain an auxiliary arm. I believe I have shown that they will play an important role and deserve to receive the utmost attention of all officers of whatever grade. How large a role they will play will depend on their future development and on the degree of our proficiency in handling and utilizing them. One thing is certain, that under any and all circumstances the battle against hostile airships must be taken up with full energy at the very start of the campaign, since under the present conditions only an airship can do effective battle with another airship.

To recapitulate: The airship is an important arm in the hands of him who fully understands how to use it. The main duties of the airship are: Far-reaching reconnaissance; firing on live targets to some extent, but primarily on dead targets with shells and explosives; destroying hostile airships and captive balloons.

In order to efficiently perform these duties, regular, extensive courses in observation should be introduced for the older, specially suited general staff officers. A numerous, well drilled airship personnel is absolutely required. In addition, large sums of money are necessary to purchase the very best of materials; target practice on an extensive scale must also be had, which will require generous sums of money.

Under these assumptions the expenditure of all moneys in time of peace for airships will, when war comes, be found to have been wise and justifiable.



VETERINARY FIRST AID.

A book, under the above title, has recently been published in England which has received favorable notice in the British military magazines. It is by Major Axe of the British Veterinary Corps and of it the United Service Magazine says: "The amount of information compressed within its pages is astonishing. The hints on horse management on the march are admirable, although the skilled horseman may regard many of them as obvious. But it is owing to the neglect or ignorance of ordinary common sense precautions that mischief is usually done, and a lack of elementary knowledge is far too common. From a veterinary point of view, it may be said that Major Axe has provided for everything that an officer thrown upon his own resources can possibly be required to know. Amateur surgery carried beyond reasonable limits is usually more dangerous than useful. Every officer of mounted troops should have a copy of this valuable little work always at hand."

The appearance of this book suggests the idea that we should not only have a similar work for our service, but that it should be one of the authorized manuals to be issued to the officers and organizations of the mounted services.

For many years we have had books on and instruction has been given in "First Aid to the Injured" man, and it would appear almost as important, possibly more important from a financial standpoint, that we should have a similar manual and like instruction for first aid to the horse and mule.

Many, very many, of our young officers, and possibly some of the older ones as well, are more or less ignorant of such matters as should be covered in such a manual. The idea should not be to make veterinarians of our officers of the mounted services, but that they should, as in the case of the human being, be prepared to render *first aid* to injured animals and to apply the simpler remedies to the sick ones, until the veterinarian can be called or in the absence of one with the command.

It often happens, not so frequently now as in the old days of service on the plains, that officers are thrown on their own resources in treating sick and injured animals, and they should be prepared to render such service.

This work, however, is intended only, as its title indicates, as a first aid book, and as such we should have a similar one in our service.

E. B. F.

BEST BOOKS FOR CAVALRY OFFICERS.

The young cavalry officer who is filled with a love for his profession and takes pride in his work is anxious to learn, but is often entirely at sea as to where to begin. For such officers, and even older ones as well, the Cavalry Journal contemplates publishing from time to time a list of such books as are known to be first class and that have been recommended by students who are competent to judge of their merits.

While it is not advisable to read these works to the exclusion of all others until the list is finished, still it may be said that every cavalry officer should be familiar with these.

An officer's position requires that he should be educated, well informed and abreast with the times in all that pertains to

his branch of the service, and this requires a certain amount of general reading. Moreover, the cavalry officer, as well as all officers, should remember that he is paid to know his profession and that the government is entitled to his best efforts for the best part of his time.

The course in reading outlined below will give an officer something to do for a considerable time, will give him an excellent start in the study of his profession and will enable him in the future to tell at a glance whether any particular military work is worth reading.

The authorized text books and manuals are presumed to be in the possession of every officer and he should be thoroughly familiar with them before commencing any other professional reading.

Studies in Minor Tactics. Staff College Press.

Letters on Applied Tactics. Griepenkerl.

The above two books, or others of a similar nature, should be carefully read in order to enable the officer to fully appreciate those that follow.

Cavalry in Future Wars. von Bernhardi.

Studies in Applied Tactics. von Alten.

Cavalry in Action. From the French, with introduction by Lieut. General Sir J. D. P. French.

Tactical Decisions and Orders. Buddecke.

Cavalry on Service. Pelet-Narbonne.

Cavalry Studies. General Haig.

The above are recommended for study in the order given.

Every officer should know something of the powers and capabilities of the other arms, and to that end he should read the following:

Quick Firing Field Artillery. Roquerol.

The Rifle in War. Eames.

Notes on Field Artillery. Spaulding.

Applied Principles of Field Fortifications. Woodruff.

For more general reading, the following are recommended:

On War. Clauscwitz-Graham's translation. (This is not modern nor easy reading, but it is a most valuable work.)

A Summer Night's Dream. Meckle. (This gives a necessary corrective to many false ideas as to what really occurs on

the field of battle. Bound with it is a good study in minor tactics.)

Napoleon's Maxims of War.

Upton's Military Policy of the United States. Government publication.

All officers should read history, as a part of his general education, and should know something of the earlier wars, but particularly should he study carefully the more recent wars. Aside from our own wars, there are the following that are recommended:

- The wars of Napoleon:
 The Life of Napoleon I. Rosc.
 Napoleon as a General. Wartenburg.
- The war in the Crimea:
 The War in the Crimea. Hamley.
- 3. The Austro-Prussian war of 1866: The Seven Weeks' War. Hosier.
- The Franco-Prussian war, 1870: Strategy of the Franco-Prussian War. Bird.
- The Russo-Turkish war of 1877-8: The Campaign in Turkey. Greene.
- 6. The Boer war:
 The War in South Africa. German General Staff.
- The war in Manchuria:
 The Russo-Japanese War. German General Staff.

As to our own wars, there are no good works on the war of 1812 or the Mexican war, from a military standpoint, and the military student must get his knowledge of these from general histories.

The Struggle for American Independence, by Fiske, is the best work on the Revolutionary war.

There is a mass of valuable literature on the Civil war, all of which, however, should be checked by frequent reference to the Rebellion Records, which may be consulted in every Post library. The following are recommended:

The War of the Rebellion. Scribner's Scries.
Military Memoirs of a Confederate. Alexander.

Personal Memoirs of Generals Grant, Sherman and Sheridan,

The following books on horses, stables, breaking, riding and the diseases of the horse are recommended:

Horses and Stables. Fitzwygram.

Horses and Riding. Anderson.

Breaking and Riding. Fillis.

Diseases of the Horse. Department of Agriculture. (A reprint of this work can be obtained for 75 cents.)

Illustrated Horse Breaking. Hayes.

Modern Horsemanship. Anderson.

There are few books on reconnaissance and scouting, but the following may be of use to the young officer:

Aids to Scouting. Baden-Powell.

The Art of Reconnaissance. Henderson.

COMMITTEE EXECUTIVE COUNCIL.

AN IMPROVED CAVALRY BOOT FASTENER FOR RIFLES.

It is one of the first duties of a cavalryman who dismounts to take his rifle from its boot, and therefore I assume that a cavalryman should contrive to have his rifle with him when he leaves his horse. I believe that the regulations require this of him. If, however, the horse falls or the man is thrown, the rifle and man are separated and the man is short his most important weapon.

The following idea, if practicable, will insure the rifle's being with the man whether he gets off his horse or is thrown off.

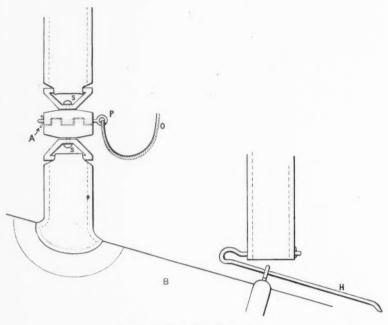
The plan is so simple that few words are necessary to insure a full comprehension of its mechanism.

Referring to the sketch, "B" is the rifle boot which is joined to the saddle by the strap and fastens as shown at the upper end, and by a strap, through the hook "H," as shown in the lower end.

Between the boot and the saddle is a swivel mounted "fastcner" which is so constructed that a heavy weight on the lanyard "C" will pull the pin "P" from its fastener "A," thus releasing the joint and allowing the boot to drop to the ground.

The hook "H" is so constructed that the ordinary "jounc-

ing" incident to galloping, etc., will not release the lower end of the boot, but will only allow it to fall when the upper end of the



IMPROVED RIFLE-BOOT FASTENER.

boot drops to the ground, as it will when the joint above is released by the automatic fastener.

It will be noticed that the "fastener" is swivel mounted, so that it will operate as well when the man leaves the horse to the front, rear or to one side.

The pin "P" is secured ordinarily by a soft wire keeper, which gives and allows the pin to be pulled out under an extraordinary weight such as a man falling from a horse would produce. The lanyard "C" is fastened from the pin to some part of the rider, such as his belt or legging, by a clip, which is to be secured when he mounts.

ROBERT DAVIS,
1st Lieut. 2d Field Artillery.

FIELD ARTILLERY EXPERIMENTAL FIRING.

Fort Riley, Kansas, October, 1909.

The present tests had their origin in the experimental firing held at the same place two years ago, the results of which indicated that there was room for improvement in several directions. A short description of the redoubt at which the firing was done at that time and of some of the features of the firing may be found on pages 353, cr. scq. of the Cavalry Journal for October, 1907. In the tests just finished, the firing was done at the old redoubt and also at a new one. This second redoubt is similar in many respects to the old one. The trace is varied somewhat and the overhead cover is also varied in material and thickness for the purpose of determining the effect of the various projectiles on each. Details of this redoubt, as well as the technical results of the firing, are confidential.

"The objects of the tests are, in general:

"1. To determine the efficiency of the different types of field cannon proposed for adoption in the United States service, at ranges corresponding to the type of gun used.

"2. To determine the resisting power of modern field works and trenches against such field cannon.

"3. To determine the relative and actual efficiency of projectiles adopted and proposed for adoption with such field cannon."*

The firing extended over the period October 4-16 inclusive, Sunday excepted, being divided into four sections as follows:**

"A. Test of the absolute and relative efficiency of plunging fire from the 3.8-inch, 4.7-inch, and 6-inch howitzers with high explosive shell against type redoubts; using non-delay action fuses with the 3.8-inch howitzer, and delay action fuses with the 4.7-inch and 6-inch howitzers." Ranges 5400 to 6200 yards.

"B. Test of the absolute and relative efficiency of direct fire from the 3-inch, 3.8-inch, and 4.7-inch guns and 6-inch howitzer using high explosive shell with non-delay action fuses with the 3-inch and 3.8-inch guns, and delay action fuses with

^{*}Official program.

^{**}Idem.

the 4.7-inch gun and 6-inch howitzer; against (a) type redoubts, (b) separate walls, (c) material.

"(b) 3-inch field gun. 3.8-inch field gun. 10 high explosive shell with non-delay action fuse fired from each gun against a stone wall 6 feet thick, 6 feet high; and 20 feet long. Range about 2200 yards.

"(c) 3-inch field gun. 15 high explosive shrapnel against limber filled with high explosive shrapnel in position. * * * Range about 1100 yards. This test is for the especial object of determining whether a hit on limber filled with these experimental projectiles will produce detonation.

"C. Test of the absolute and relative efficiency of high explosive non-delay action shell, F. A. shrapnel, and high explosive shrapnel fired from the 4.7-inch gun at targets representing troops beyond the effective range of light field guns.

"Tactical conditions. Our force is assumed to be occupying the ridge Campbell Hill-Sumner Hill and is engaged with the enemy who are holding the line Carpenter Hill-Saddle Back. From a point on Campbell Hill the C. O. of a battery of 4.7-inch guns can see the enemy's infantry in column of route, moving along the Estes Road near 16, about 7000 yards away.

"(a) Targets: Four hundred box figures 5 feet 6 inches by 12 inches by 12 inches, representing a battalion of infantry in column.

"The B. C. observes in the same general direction, infantry resting in mass in apparent safety; range about 7000 yards.

"(b) Targets: Four hundred box figures 5 feet 6 inches, inch mountain gun, 3-inch field gun, 3.8-inch gun, 3.8-inch by 12 inches by 12 inches, representing a battalion of infantry, in massed formation.

"D. Test of the absolute and relative efficiency of the 3-howitzer, 4.7-inch gun, 4.7-inch howitzer and 6-inch howitzer against personnel intrenched, using high explosive non-delay shell, high explosive shrapnel and F. A. shrapnel; at ranges corresponding to the type of gun used—close, medium and distant." Targets: silhouettes in simple standing trench, in trench with head cover, and in trench with overhead cover. Ranges 1700 to 6200 yards.

The program provided for more than 500 shots to be fired

under the various conditions. It will be noticed that no spectacular infantry attack on the redoubt was provided. One was made two years ago as a part of militia instruction. The effectiveness of such an attack can be ascertained only by actual trial in war.

The firing was under the direction of the Field Artillery Board. Other official observers included officers of the Engineer and Ordnance departments. In addition, there were many other officers present out of general interest in the subject, among whom were the Chief of Coast Artillery, officers of the General Staff and Signal Corps, the Army Staff Class, several instructors of the Army Service Schools, and several officers, chiefly of the cavalry and field artillery on leave and at their own expense.

The 3-inch gun used is the one with which our field artillery is now equipped. The new types tested are the 3-inch mountain gun, the 3.8-inch gun and howitzer, the 4.7-inch gun and howitzer, and the 6-inch howitzer, of which one each and two carriages were furnished. A high power observation telescope of the prism type, mounted on a tripod, was used. These are supposed to be supplied to the battalion and regimental commander. In campaign, all higher headquarters should be equipped with an instrument at least as good as this one. There were also used in the field lines of communication some experimental telephones which had points of advantage over the buzzers now in use and which will probably lead to the development and adoption of a superior instrument.

While the official deductions and recommendations concerning the tests and the material are not known, the general impression seemed to prevail that the 3.8-inch gun and howitzer would not be adopted. This is due to the fact that this series is not sufficiently powerful over the 3-inch guns to justify its adoption. The opinion also appeared to prevail that our field artillery as finally adopted should consist of the 3-inch mountain gun, the 3-inch field gun, 4.7-inch gun and howitzer, and the 6-inch howitzer. The 6-inch howitzer has sufficient mobility to keep pace with infantry on the march and is strictly an attachment of the field army.

·To the observer there were many points of interest to be

noticed, one of which is the pulverizing effect on the projectile of high explosives.

While the firing was in progress a good opportunity was given to observe the zone in front of a trench or other work upon which our artillery is firing within which it will be unsafe for our attacking infantry to advance so long as the firing continues. So many conditions here existed that would be materially modified in war as to render all views merely conjectures.

HOWARD R. HICKOK.

Fort Leavenworth, Kansas, October 17, 1909.



PROBLEM NO. 13.

(See Journal U. S. Cavalry Association, September, 1909, page 379.)

SOLUTION.

Presuming that Colonel A. is a man of good tactical judgment and education, his *coup d'ocil* will take in the situation at a glance, his decision will be formed instantly, and his orders will be issued verbally immediately upon receipt of his division commander's message. The course of reasoning by which he arrives at these conclusions is somewhat as follows:

Estimate of the Situation.

The division is now advancing to capture the hostile position. I have been ordered to "co-operate in the movement, operating against the hostile right and rear." The method of carrying out these instructions is left to my discretion. Either or both offensive and defensive action may be necessary. This, however, I cannot determine without weighing the different alternatives.

The line Atchison Hill-Sheridan's Drive is now held by the enemy. While no mention is made in the message of Government and South-West Hills, it is probable that these hills were visited by our patrols and that the enemy was not then in force there. An examination of the map indicates that the enemy's position, when fully established, should extend to include the saddle near the cemetery southwest of South-West Hill. The

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slowness of arrival of the hostile cavalry is of advantage to my mission and to my division and simplifies my present duty.

Ten minutes ago the enemy's cavalry was at Hund Hill and has probably continued to advance. It could have turned south at 28, but that is hardly probable, for such a route would involve a long detour via 50 and through the woods to 68, or through a long defile via 52 to 56. Scouting parties may, however, advance by these routes. If it continue to advance at its previous rapid gait, its head should now be near 24 or even descending the hill eastward of 24. The further intentions of the enemy's cavalry are unknown, whether to create a diversion on our left and rear or to protect and operate in connection with the hostile right. If its mission be to protect and operate with the hostile right, the cavalry may move forward from 24 to the right of the main position near 22. The strength of the hostile cavalry is unknown, but as the message of the division commander indicated the force encamped yesterday at Lowemont to have been about a division, the cavalry now advancing is probably the divisional cavalry or the greater part of a regiment. I may not only have to oppose this regiment, but may also become engaged with the left of the enemy's line of battle in doing so.

The opening of hostile artillery fire would indicate that my division has offered some kind of a target, most probably by advancing to the attack. From the information contained in the message as to the hostile strength, opposing forces are about equal. The capture of the hostile position is essential to the security of our foothold west of the Missouri River. Aggressiveness is, therefore, necessary and this is the course my division commander has adopted.

In front and close at hand is a line of hills and ridges which have a general trend east of north, being more or less wooded and rising 100 feet or more above the immediate terrain. The enemy's position is on this ridge a mile or more to the north. My command is just now near a small stream, which heads a mile or so farther west and deeply indents the ridge. A road follows up this stream and about half a mile from here (at 56) it forks, one fork leading to the southwest and crossing the ridge at 44, and the other fork leading to the northwest over the ridge

via 24 and 30. It was on this last road that the enemy's cavalry was reported as advancing a few minutes ago. Both of these roads are defiles as far as the crest of the ridges, and should I advance by either of them the enemy's cavalry would have a most excellent opportunity to take me as in a cul-dc-sac. Should I advance to 56 and take the fork toward 30, called the Zimmerman Road, I would probably be brought under a heavy cross fire from the Haug Hill and from the 24-22 ridge. Should I move toward 44, I could be brought under a disastrous flank fire from the crest of the Haug Hill without means of replying thereto. In such a movement the battery could assist but little. The only available position near at hand for such a movement is on the spur about 400 yards west of here. Even that position has a very narrow field of fire with the comparatively short ranges of the eastern crest of Haug Hill. To be sure, the possession of the Haug Hill would give me a good point from which to operate against the hostile right and rear.

There is a road south of here, running west from 68, turning north at 50 and finally crossing the two roads just discussed. This road is much longer and the first part is through the woods. It has the advantage of following high ground all the way. If the 60-56 road be covered, the left of our division will be protected. If the 60-56 road be given up and an advance be made by 68-50, the left of the division will be exposed to the operations of the hostile cavalry. I could leave part of my command, say a squadron, here to block the 60-56 road and with the rest of the command move via 68-50-44. That would be a good move against an inferior force of cavalry, but there are good chances here that I am opposed by about an equal force. Such dispersion is so great that there is a great probability that the scattered parts may not co-operate in any subsequent engagement.

Just southwest of here is a hill or ridge, a part of the main line of ridges, the woods on which extend down a distance on the northern slopes. If I occupy the edge of these woods with my command dismounted, I can prevent the enemy from advancing by the 56-60 road and I will also be in a position from which I can quickly move, should the hostile cavalry make a detour by 50-68. In this position I would also be conveniently located for

withdrawal after the engagement, should our division be unsuccessful. However, should the enemy's cavalry join the main hostile defensive line while I remain in this location, I would occupy a passive attitude toward the engagement and would be contributing nothing in aid of my division.

I could remain where I am until the hostile cavalry gives further indication of its course of operations. That, however, may be a waste of valuable time, now in the fleeting changes of battle when moments are golden. For example, should the hostile cavalry march eastward to 22 while I remain here, it could connect with its main body without my having offered any opposition.

The spur northwest of 60 appears to offer some points of advantage. My command can reach it quickly and will then be on the same elevation as the troops of the enemy now to the north and to the west. This spur is covered with timber and must be trayersed before the open ground with a field of fire to the north and west is reached. I will have some trouble in taking my horses through these woods, even using the obscure roads therein, and also some difficulty in withdrawing them should I be forced to retire. When I reach the saddle near the cemetery. I may be able to advance farther west against the hostile cavalry, though the probability exists that I will be met in that vicinity by this cavalry on my left and my hostile infantry on my right. I can make no use of the battery until I secure the western edge of these woods, and, perhaps, not then. This hill is a salient, pointing away from the hostile position. Should our troops suffer a repulse, a retreat from this hill will be a difficult matter. However, by my occupying this hill, the hostile cavalry cannot use the 56-60 road. Should it make the detour via 50-68, my patrols should give warning in time to enable me to intercept it. Further, if I occupy this spur and do nothing more than to engage the enemy's troops in that vicinity, I will be creating a diversion in favor of the main attack of my division.

It seems that the advantages of every alternative open to me can be countered by one or more serious disadvantages. Balancing the one against the other, an advance to the hill northwest of 60 will be of more advantage to my division. Immediate action is necessary and, as nothing will be gained by leaving

any part of my command behind, I will move out rapidly with my entire command, preceded, of course, by part of the command as advance guard. The patrol now out on the 68-50 road should be sufficient to give me timely warning of any hostile approach from that direction, but, in order to prevent any mistake on that point, I will dispatch another one.

My staff, field officers, and the battery commander having assembled. I give them the following verbal orders:

Orders.

"The enemy occupies a position on that (pointing) ridge a mile and more north of here and has just opened fire on our division which is advancing to attack the position. Hostile cavalry was advancing on that (pointing to 56-30) road a few minutes ago and scattered one of our patrols.

"We will advance at once to secure that hill (pointing to hill northwest of 60).

"Major A., take two troops of your squadron and move out rapidly as advance guard, by this road (the one through 60), and take the shortest route to the top of the hill designated. Push ahead until you reach the clearing at the northwest of the hill.

"The remainder of the command will follow at 400 yards, in the order, remaining troops 1st Squadron, 2d and 3d Squadrons, and the battery.

"Major D., send an officer's patrol of five men via the 68-50 road to report promptly any hostile advance by that route.

"I will ride at the head of the main body."

I also inform the division commander of these dispositions by a message, which is returned by the staff officer who brought me his instructions, as follows:

"Hostile cavalry is advancing by Zimmerman Road. In compliance with your instructions to co-operate in our division's movement, operating against the hostile right and rear, I am advancing with my entire command to vicinity of cemetery near 22."

PROBLEM NO. 14.*

(See Map of Fort Leavenworth - CAVALRY JOURNAL for July, 1907.)

SITUATION.

A Blue division, operating against a Red division which is advancing on the west bank of the Missouri south of Saint Joseph, Missouri, has arrived at Lansing (10 miles south of Leavenworth).

On 1 October, 1909, the 2d Squadron and Machine Gun Platoon, 1st Blue Cavalry, having been detached on a special mission to the north of Kickapoo with instructions to return to Lansing upon its completion, has accomplished its mission without having seen anything of the enemy and is returning via Frenchman—64 road. At 3:00 p. m., as Major B., at the head of the main body, arrives at the road cut north of Government Hill, he looks back and observes a mounted force in extended formation about a mile or more in length moving east on Atchison Pike, its head a short distance west of the Mottin house.

A trooper from the advance party now rides up and informs Major B. that the advance party has halted under cover north of Atchison Cross, that a few mounted men are moving south on Grant Avenue near Metropolitan, a few more can be seen on Grant Avenue at Pope Hill, that the dust along Grant Avenue is rising as far back as Fort Leavenworth, and that a patrol of three Red troopers moving south on Prison Lane is just crossing Long Ridge.

A corporal now rides up with a Red trooper, which he captured at 18, the other two members of the patrol escaping, and says that a Red mounted force, head of its advance guard now just south of Avenue Hill, is moving at a walk east on Dakota Street, and that considerable dust is rising in the valley west of 60. The captured trooper says that he belongs to Troop A, 3d Red Cavalry, that there are two troops in his column, and that

^{*}The approved solution will appear in the January number of the Cavalry Journal.

his entire regiment was together at noontime, but does not know where the other troops are now.

REQUIRED:

- 1. Major B.'s estimate of the situation.
- 2. His initial orders.
- 3. His further intentions.



The struggle for American Independence.*

These volumes are an enlargement and a completion of Mr. Fisher's earlier work, "The True History of the American Revolution," and they ought to be read by every

American student who seriously desires to have a historical rather than a merely partisan view of our forefathers' great struggle for national freedom. Mr. Fisher is the first American historian who has undertaken to give us a glimpse of the other side—the English view. In fact, there are three views, all as far apart as the apices of an equilateral triangle. The first is the English or Tory view; the second is the Whig view, which one gets by reading Trevelyan's history of the Revolution; and the third is the American view, the only view heretofore taken by any American author—the view that we have all grown up with from the school days of our youth. Few Americans have taken any other view of the struggle. How many of us have ever seen a British account of that war? How many even have read Professor Goldwin Smith's fair, friendly and, withal, charmingly written epitome of the history of the United States?

From our childhood we have learned that George III. heaped

^{*&}quot;The Struggle for American Independence." By Sydney George Fisher. J. B. Lippincott Co., Philadelphia. Two volumes. Price \$4.00.

outrages upon our long-suffering ancestors, until at last the burden became more than they could bear; that then they rose and put forth their might to cast it off. We have read Fiske and the other historians only to get the details of the struggle. On the one side we have learned of nothing but wrong and injustice: on the other of nothing but right and grievances. And we have not been taught that there was any division of sentiment or opinion among Americans; we have been led to suppose that they were practically a unit from Vermont to Georgia; that loyalist Americans were renegades too few to be considered, too wicked to be thought of but in scorn; and the name Tory by which they have descended to us is to the ordinary American a synonym of traitor with every added adjective of crime and inhumanity. Mr. Fisher, on the other hand, presents to us the novel view that there were really two political parties in America, one of which was for separating the colonies from the mother country, and for setting up an independent state, while the other was for keeping the colonies a part of the British Empire. Probably neither party was wholly satisfied with all the acts of the government relating to the colonies, but the Tories or loyalists believed in having patience and waiting for the righting of their grievances; while the party of independence, the patriots, as our historians . have been pleased to call them, were for throwing off the voke of .British rule altogether. Of course, the patriots in time came to outnumber the lovalists, but the latter were far more numerous than our histories have generally led us to believe. Indeed, in some sections, like New York, the loyalists were largely in the majority.

Moreover, our other historians have given us to believe that our Revolutionary ancestors, once patriots, remained so through thick and thin to the end; that they would have kept up the struggle to doomsday rather than yield. From Fisher we get a very different picture. We find—and he quotes most respectable authorities—that the loyalists formed a very considerable part of the population, and that there was much defection among the patriots. Even John Adams in 1815 admitted that a third of the people had been loyalists, and many creditable authorities place the estimate much higher. Few of us know, or stop to consider, how large a number of Americans actually bore arms on the

British side in the war. In fact, the author says the Revolution was "more a civil war than the conflict between the States in 1861; because that was essentially a war between two sections of the country, while the Revolution was a war between two parties each of which was numerous in every part of the country."

When we remember that out of a population of "three million people armed in the holy cause of liberty" Washington could only raise and maintain continuously an army of "between 5,000 and 10,000 men," we must be persuaded either that our ancestors were not all on the side of independence, or else that their fighting spirit was not of the highest order. And our opinion of their patriotism is not strengthened by the picture of Washington's soldiers in rags and with bleeding feet at Valley Forge, "surrounded in every direction by a rich farming country * * while the farmers voluntarily brought and sold their supplies to the British in Philadelphia, leaving the patriots to starve."

Other historians have given us to believe that our people would have been content to remain British subjects if they could only have obtained redress of their grievances. To our mind, Mr. Fisher's view does greater honor to the spirit of our forbears—the view that the war was the outcome of a desire among our people, which grew into a purpose, to become free and independent with allegiance to no government, but a government of and by themselves. Slaves that arise in their strength and cast off their yoke for the simple sake of becoming freemen command our respect and admiration far more than slaves that endure until driven by sheer desperation to strike for freedom.

The author traces ingeniously, logically and entertainingly the evolution and growth of the independence party which at last became strong enough in numbers and influence to overthrow the loyalist party in America and the British authority. He shows how most of the early colonies had been granted very liberal charters by the British crown in order to encourage the emigration of troublesome religious sects from England, such as the Puritans of New England, the Quakers of Pennsylvania, the Romanists of Maryland, and, at the time of Cromwell, the Episcopalians of Virginia. In fact, the early settlements were

not colonies at all in the modern sense of the word; they were absolutely free settlements bound by no colonial ties to the home government. It was not until after the American Revolution that the English organized a real colonial system. The perfect independence of these early settlers was the germ from which sprang the principles of the "patriot party" of Revolutionary times; and our ancestors gained strength in their political faith and acquired the forms in which to give it expression and argument by reading the works of Puffendorf, Locke, Burlamarqui, Beccaria and Montesquieu.

Not, however, until the authority of France was expelled from America did any occasion arise for their asserting and insisting upon the principle of absolute freedom. The presence of the French in America served as a restraint to the colonists as well as to the home government of England, and as a bond to hold them together. The colonists dreaded the contact and the encroachments of the French, and feared that they might, if left to themselves, fall under French authority; hence they were glad to cling to England as protector; whereas England counted on the support and aid of the colonists to oppose the French aggressions in America; hence the mutual dependence of the crown and the colonists, and their mutual forbearance. But as soon as this restraint had been removed the crown began to assert its rights over its colonial subjects, and the Americans began to insist upon their principles, based upon charter rights. This brought about a quarrel that lasted for ten years and ended in war.

Thus, in 1764 the government undertook to suppress smuggling in the colonies and to enforce certain colonial laws that had long existed, though they had not hitherto been enforced; but the effort aroused such violent resistance that "when the year 1774 was reached the mobs and tar-and-feather parties had driven so many British officials from office that all attempts to check smuggling and enforce the trade laws were necessarily abandoned until the army could restore authority." This use of British troops was the origin of our national dread of a regular army and of the bogy of militarism. Up to this time soldiers had

never been stationed in America for the purpose of keeping order amongst the colonists.

The colonists drew a fine distinction between external and internal taxes, denying Parliament's right to levy the latter, while admitting its right to levy the former, which they avoided by smuggling. The author says the distinction "was absurd * * but was good enough to begin with; and the Revolution, during the seventeen years of its active progress, was largely a question of the evolution of opinion." He points out other inconsistencies wherein the colonists admitted Parliament's right to do some things, and denied its right to do others, in which its authority was equally as clear.

Mr. Fisher has adopted the old-fashioned method of giving his authorities in foot-notes. Of course, people generally do not waste much time in reading foot-notes, but if anyone doubts the author's statements, he can, by this means, satisfy himself by

looking up the originals.

Some persons there are, no doubt, who will say they do not want to read any book that will change their point of view of their Revolutionary ancestors' deeds, and they do not want their children to read or study such a book. But those persons are wrong; they do themselves, their country, and their children an injustice. Small men may cloak the indiscretions and sins of their youth; but great men can admit theirs with impunity. By so doing they only give further token of their superiority. So a weak and struggling nation may need to conceal the evil deeds of its past from its people, lest it weaken their pride and their patriotism; but not so a great nation. The United States today, with her commanding place among the powers of the earth, can trust her people to love and honor her in spite of some of the acts of her past; she has no need to conceal any truth of her history.

The author appeals to military students by reason of his clear comprehension of the strategy and tactics involved in the military operations. His descriptions are lucid, and full enough of details to be easily followed, yet brief enough not to be tiresome. The two octavo volumes of nearly six hundred pages each are very tastefully wrought, the type is large and clear, the paper

is of the dull yellowish tint most comfortable to the eye, the index is full and well done, and the mistakes of proof-reading are rare. The author's style is simple and pleasing. On the whole, this is the best history that has been written of the American Revolution.

M. F. S.

Hygiene.*

The fact that within six months no less than four handbooks on Military Hygiene, primarily intended for the use of line officers, have been published in the English language, gives evidence of the increasing attention which this most important subject is at last deservedly receiving. It is highly gratifying that of these four books, three should have emanated from medical officers of our own army, viz: General Woodhull, Colonel Havard and Major Ashburn. All of these are about alike in the character and scope of subjects treated, and, as their appearance has been almost simultaneous, it has not been possible tor one to have advantage over the others in more recent knowledge of sanitary advance.

All are excellent and up to date, and we can not have too many books of their sort and character.

It is becoming more and more appreciated by line officers that the real purpose of military hygiene and sanitation is not merely humanitarian, and thus a subject in which line officers can be only casually interested, but that its true function is practically utilitarian in the prevention of the unnecessary waste of men under arms. That such waste of the most important, essential and costly of all military resources may exert a profound influence on purely military plans, purposes, movements and strategy is evident to the most superficial reader of military history, in the pages of which epidemics of preventable disease constantly figure in bringing about the modification or abandonment of campaigns and as the cause of disability and resulting disaster.

Given opposing forces of equal numbers and efficiency, the

^{*&}quot;Military Hygiene for Officers of the Line." By Brigadier General A. A. Woodhull, U. S. Army, Retired, late Colonel Medical Corps, U. S. Army, John Wiley and Sons, New York. Fourth Edition — enlarged. Price \$1.50.

one which pays less attention to the prevention of disease will ultimately find itself in a position of what may be such decisive numerical inferiority and lowered efficiency as can not be offset by the highest degree of military genius on the part of its commander.

It is therefore to be regretted that General Woodhull and the several of the contemporaneous authors on the subject have not more specifically impressed upon their line officer readers the fact that military hygiene, which has for its direct object the conservation of the soldier and the maximum strength on the firing line, lies at the foundation of all military efficiency and must necessarily be presented to military students as a part of military economics in which the line officer and strategist—and not the doctor and humanitarian—is chiefly concerned.

General Woodhull is, of course, well known as a pioneer in the instruction of line officers in the care of troops. In his latest (fourth) edition of his book he has very wisely departed from the former somewhat dogmatic enunciation of sanitary principles which left unexplained many matters which would naturally suggest themselves to the inquiring mind. His new work is very readable and presents in attractive and entertaining form a subject which in some books is set forth in dry, prosy and uninteresting manner.

Together with its subject matter, the literary style and general makeup of the book are excellent. The volume is rather meagerly illustrated for a work of its character, and such cuts as there are do not seem in all instances to be as well selected as they might have been. But on the whole the work is admirable and well suited to the purpose for which it is intended.

It is a cause for just pride on the party of the Army Medical Department and for sincere congratulations to General Woodhull that nearly six years after his retirement for age he retains the inclination and ability to prepare a work of such excellent character. His unceasing and helpful interest in military affairs is in refreshing contrast to the too common attitude of line officers; and his activities go far to demonstrate the fact that age is a condition and not a period of years, as some would have us believe.

E. L. Munson.

Provisioning of the

Modern Army.*

According to an introductory note prefixed by General Sharpe, the revision of his original work under this title was undertaken by Captain Cook with the idea "that by additions to the text and rearrangement of the subject-matter he could bring the volume up to date and make it adaptable for use as a book of reference, or a military text-book for schools, there being no American work which included a summarization of the varied and extensive literature on the subject."

The subject matter of the original has been considerably rearranged, some has been omitted entirely, and a few additions bave been made. Among the additions is a solved problem, involving the number of four-mule wagons necessary to carry the rations and forage for a division of Field Service Regulations strength, for a distance of seventy-five miles in front of an advance depot. The original subject matter has been much condensed, so that little more than bare abstract principles remain. The addition of the solved problem is a step in the right direction toward using the "applied methods," now coming into general use for instructional purposes. This method could probably have been further used in the revision by the introduction of concrete examples from the most recent war, with maps showing bases, depots, and lines of communication.

The revisor takes a shot at paper work—the bugbear of our army—in the following words:

"In time of peace a well organized supply department has no occasion for rush, and the tendency of thoughtless officials is to prescribe a system of accounting so rigid and exacting as to impair efficiency of the army if continued during war. To expect officers, when war comes, to burst suddenly all this red tape of accountability and assume the responsibility of prompt action, is not a logical sequence of such a system of training."

To this statement of the case, our officers will respond with an unanimous "Amen" and will fervently hope that the chiefs

^{*&}quot;The Provisioning of the Modern Army in the Field." By Brigadier General Henry G. Sharpe, Commissary General, U. S. Army. Revised Edition by Captain Frank A. Cook, Subsistence Department, U. S. Army. 1909. Franklin Hudson Publishing Co., Kansas City, Mo.

of supply will effect the proper remedy.

The book is a readable treatise on the subject matter indicated by the title, and, if the military student has not already a copy of the original, he may do well to supply himself with a copy of the revision.

Ніскок.

This convenient handbook of the elements of military hygiene is primarily intended for the instruction and guidance of line officers and enlisted men. It has already been adopted by the War Department as the official text book in this subject for use in the garrison schools, to which it is particularly adapted, and in which it will undoubtedly serve a most

excellent purpose.

The book is compact, excellently gotten up, well planned and entertainingly written. The effort has been to create an up-to-date presentation of the more important facts relating to the prevention of disease, without going into the lesser details of the subject. In this the author has been very successful and he has produced a practical guide for the care of troops, with the subject matter of every page of which every line officer should be familiar.

So far as the enlisted men are concerned, the more intelligent will undoubtedly largely understand this book and derive much benefit therefrom; but for that considerable proportion of soldiers whose education is rudimentary or defective, this book, even in the simple language in which it is written, will probably be too technical. However, a book specially prepared for this latter class would necessarily savor too much of the primer style of instruction to appeal to officers and to enlisted men of higher attainments.

The author, with his broad knowledge of the subject, is of course under the constant temptation to drift into detail and add material whose practical value is not really commensurate

^{†&}quot;The Elements of Military Hygiene." By Major P. M. Ashburn, Medical Corps, U. S. Army. Houghton, Mifflin & Co., New York and Boston. Price, \$1.50 net. Postpaid.

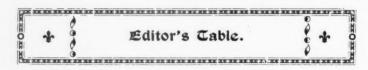
with the resulting increase in the size of his book. Some evidence of inability to resist entirely such temptation is found in the mention of yaws, a disease not even common in medical practice, and other similar instances might be adduced.

For its special purpose the present book is large enough, and its text could probably be cut down by ten or fifteen per cent. without any loss in practical value. On the other hand, the book is entirely without illustrations, and there is little question but that a reasonable number of well chosen cuts would add very materially to its attractiveness and usefulness to the average reader.

Major Ashburn is to be congratulated on the production of a thoroughly good book, the use of which in our service cannot fail to result in humanitarian benefit and military advantage.

E. L. Munson.





A PLAN TO PROMOTE THE EFFICIENCY OF THE ARMY.

Although but few replies have as yet been received regarding the proposed plan to equalize promotion, etc., in the army, those that have come in are strongly in favor of some such scheme.

Of it one of our field officers of cavalry writes: "I wish to congratulate you and the association upon the 'plan' submitted for the efficiency of the army. I endorse each proposition and will assist to my full power the proper authorities to the adoption of the scheme."

Another cavalry officer speaks well of it except as to the proposition for transferring officers as proposed for the purpose of equalizing promotion upon an increase of any one branch of the service. This one section gave more trouble and was more fully discussed for several months by the Fort Leavenworth branch, and it was thought that it would probably provoke more comments, than any other.

In this connection, the following extracts from a letter from Major R. H. Noble, First Infantry, will be of interest:

"I am not envious of the Navy, but my opinion is that their scheme of promotion is probably more liberal than the country will stand for, for the Army. We are just as much entitled to promotion and efficiency tests as they are, but, unfortunately, the Army has not the hold on the public heart that the Navy has, and a great deal of the public interest in the soldier is bestowed

upon the National Guard. For this reason, as you will note, my scheme of promotion is very moderate, and for the same reason I am very sure that the cavalry scheme to promote the efficiency of the Army, as published in the September number, which provides 'that any field officer of thirty years' service may elect voluntarily to retire with the next higher grade,' is not moderate enough. I think the effect of this would be that a considerable number of officers, who might, and ought to be, eliminated without any further promotion than they have secured, will want to hold on to the very end. Major generals will want to retire as lieutenant generals, brigadier generals as major generals, and so on down the line. It seems to me that 35 or 40 years would be a better requirement for such preferment, and it should not apply to any officer above the grade of colonel. There are undoubtedly a number of colonels, lieutenant colonels, and perhaps majors who have been over-slaughed, or who have been in bad luck in promotion, who have many weary years of Indian frontier service and Spanish-American war service to their credit, who are worthy of such promotion.

"If such a law were passed, in a few years most of these would have been promoted and provided for, and after that it would be only an exceptional officer who would be entitled to retire with an additional grade. I think it would be not amiss to count the service in the tropics double for retirement, so that with 30 years, 10 of which have been tropical, one could retire, under the 40-year provision, but I do not see why the additional grade should be granted.

"I do not know that you are especially interested in my opinions on this matter, but if you happen to think as I do, it might do no harm to call it to the attention of the cavalry committee.

"I think my suggestion of 35 years of service, or perhaps 32 years' actual service, eight of which have been spent in the tropics, with retirement with one increased grade, is a more reasonable proposition, and more likely to be adopted; but I do not look for the adoption of anything much more liberal than the present law:

"If all our colonels were selected, undoubtedly most of them

would reach the grade of general officer before they retired; but I do not see any reason why everybody should reach that grade, even on the retired list, for mere length of service."

MACHINE GUNS.

Whatever may be the opinion of our cavalry officers regarding the use of machine guns with cavalry, it is evident that all foreign countries are believers in their use. Almost every foreign magazine received has one or more notices of improvements in them or of an increase of their number being made in some army of Europe, and possibly no one subject is discussed more fully than is this one.

It is true that the questions of airships and auto cars are receiving much attention, and many countries are experimenting with them, but at the same time these are considered in the experimental stage, while machine guns have, they believe, proved their worth.

Many of their writers advocate lighter machine guns for cavalry and that their use in any case where it interferes with its mobility is detrimental. Captain J. C. Lavau in his book, "Machine Guns with Cavalry," states that the mistake was made in all European armies when these guns were first introduced in looking upon them as light artillery and in making the personnel of the machine gun detachments too large, whereby the mobility of the cavalry was seriously affected, and that by adding to cavalry light machine guns, which can be carried on a horse's back, the necessary fire power is added without interfering with the mobility or the spirit of the cavalry.

In this connection the following extracts from a description of "The Perino Machine Gun," translated from the *Revue Militaire Suisse* by First Lieutenant West C. Jacobs, Coast Artillery Corps, and which appears in the September-October, 1909, number of the Journal of the United States Artillery, will be of interest:

"We scarcely recognize the great advantages of foreign

makes of machine guns, like the ordinary Maxim, which weighs 49 kilograms complete, the tripod weighing 20 kilograms; the light Maxim, weighing 20 kilograms; the Bergman, weighing 12 kilograms; the Madsen, with which Denmark has experimented very successfully, and which, while weighing only 6 kilograms, fires automatically 300 rounds per minute and can be carried, with its forked rest and 1000 rounds of ammunition, by a single trooper on his horse; the Schwarzelose, light, strong, and very compact, with which Austria has, during the past year, conducted experiments with a view to using it for her Alpine troops, and which has been adopted by Holland; and the Vickers-Maxim, which has been bested by the Perino machine-gun at competitive trials held in Italy.

"The Perino machine-gun has a single barrel surrounded by a cooling tube 93 ntm. in diameter, containing cold water. In shape and size it very much resembles a large rifle. The mechanical details are simple and of strong construction, so that it can be easily and rapidly mounted, or dismounted, without the aid of special instruments. The breechblock, with all its working parts, is very simply made of six strong pieces, thus doing away with any complicated mechanisms—so much so that an unskilled person may readily dismount it.

"Repairs are easily made and all parts can be immediately replaced, a feature not possessed by the Maxim.

"The caliber of this gun is the same as that of our rifle, so it has the great advantage of using the same cartridge.

"The present weight of the Perino is 27 kilograms, but in future models this will be reduced by 3 to 4 kilograms by using steel-bronze in several parts. The tripod is provisional and its design is excellent, but in its present form it weighs too much. A reduction in weight to 20 kilograms is not too much to expect. It could hardly be made lighter than this without sacrificing the stability of the machine while firing.

"The fire is continuous, every operation that insures this continuity (extraction, loading, firing, etc.), being automatic; all that is necessary is a pressure on the trigger. It may be fired intermittently, however, shot by shot, by successive pressures on the trigger. Continuous fire is effected by means of clips, or a magazine containing 25 cartridges. The clip is metallic, rigid,

and rectangular in shape. The hopper, which is placed on the left side of the breech, is also of metal and holds 10 clips (a total of 250 cartridges) which are automatically loaded into the gun. The hopper can be filled by hand with great facility. The clip is superior to a ribbon in that it is more easily filled when empty.

"The greatest rapidity of fire—obtained, it is true, by a fully trained detachment—has been 500 shots per minute; the average, 425 shots per minute. A well-trained detachment would be able to exceed this latter rate. The barrel is cooled by the injection of a stream of water from a large syringe, an operation that can be carried on while the gun is being fired. The steam escapes by a small pipe fastened underneath the gun on the forward part. It was observed in the Russo-Japanese war that the steam, escaping in little white clouds, disclosed the positions of the machine-guns. Perino has obviated this difficulty by providing a tube that carries the steam to the ground, where it is condensed by the herbage.

"This gun has the same range as the small arm, 2000 yards. Its accuracy, although influenced largely by the stability of the tripod and its weight, is excellent at all ranges and its dispersion very slight. The sight is very simple and strong and allows the gun to be fired with a sweeping motion in the horizontal plane; with varying elevations for range; or the two combined.

"Furthermore, the opinion was expressed that all Alpine battalions and infantry and cavalry regiments should be supplied, in time of war, with a sufficient number of machine-guns (this to be at least 4 per regiment and a section of 2 for each Alpine battalion); and, in order that the personnel may be instructed without delay in the use of the new arm, under all conditions of war, there be issued to each of the above designated corps a

Perino machine-gun with a supply of ammunition.

"The armament in time of peace would then be as follows:

FOR CAVALRY REGIMENT.

One gun (carried on a horse led by a mounted man).

A supply of ammunition (carried on a horse led by a mounted man).

Three mounted men.

Total, 7 horses, 5 men (not including the chief of detachment)."

CAVALRY AND THE AEROPLANE.

An article under the above title appeared in the July, 1909, number of the Journal of the U. S. Infantry Association.

Regarding it the Journal of the Military Service Institution (September-October number) comments editorially as follows:

"We note that the contents of this number (July, 1909) relate very properly to things that especially concern the foot-soldier with the exception of one paper, which, if it deserves serious consideration, has apparently strayed from the cavalry corral. Airships will be useful in war. Cavalry will continue to be indispensable to a successful campaign in the future as it has in the past."

Not only did we think that this article did not deserve serious consideration, but also it appeared that there was an undertone of sarcasm in it that should, for other reasons than the one given by the Editor of the Journal of the Military Service Institution, have barred it from the pages of a journal of another branch of the service. "Harmony" is the strength of all armies, but more especially of ours.

THE CAVALRY JOURNAL AS A BI-MONTHLY.

A former editor of the Cavalry Journal and a distinguished member of the Cavalry Association writes regarding the change of the Journal to a bi-monthly publication as follows:

"I am very much afraid that a mistake has been made in establishing the Journal on a bi-monthly basis. I, at one time, when *suitable* articles were not on hand, only by the greatest personal efforts saved it from going out of existence.

"To increase the number of the Journals from four to six per year, and to fill them with school essays, however good, will bring us no credit. You must have original articles and translations of good foreign articles, or go back to a quarterly. This would be a serious step, and as editor you would have to share the blame with the Council.

"Unless you have a supply of manuscripts sufficient to last two years from which to cull, you had better reconsider the bi-monthly proposition before it is too late. There is really no demand for a bi-monthly."

As the September number of the Journal had been issued before this letter had been received and the change from a quarterly to a bi-monthly had actually gone into effect, it was too late to reconsider the question. However correct the above quoted ideas may be, and there is no doubt that it will require strenuous work to procure sufficient good, original articles for a bi-monthly publication, yet there has been very frequently during the last two years a call for the Journal to be so published and, in several instances, a monthly issue has been advocated.

Many of those who have advanced the idea of more frequent publication of the Journal stated that they would much prefer to receive it oftener, even if the same number of pages or the same amount of printed matter was printed each year.

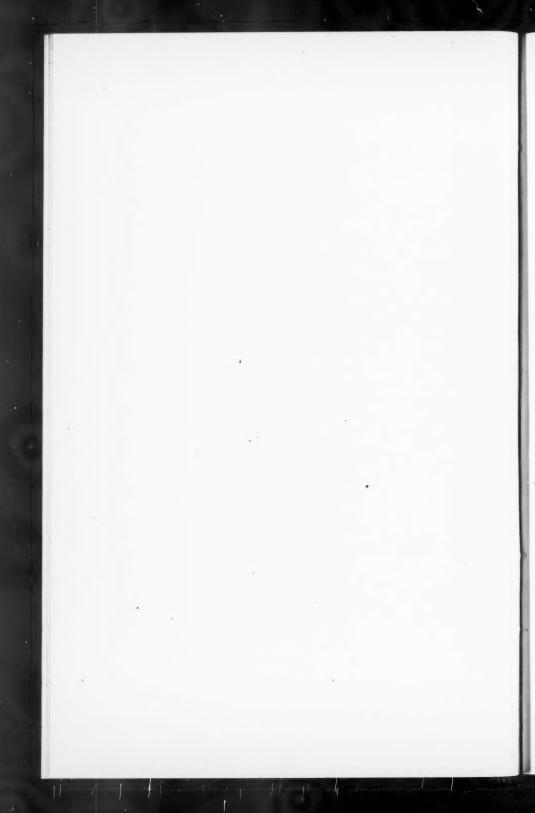
The Executive Council have great hopes that the newly created "Sub-council" or regimental representatives will be able to stir up more enthusiasm among our members and induce them to contribute original articles more freely.

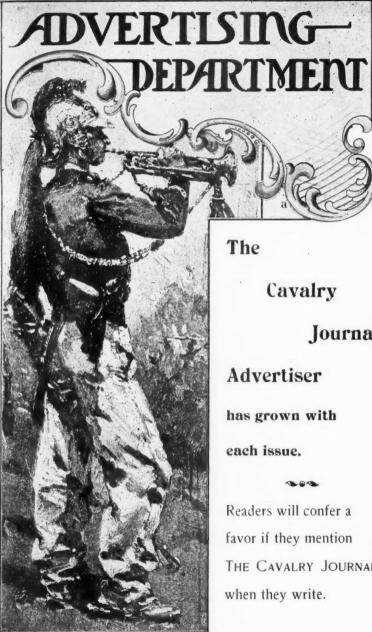
As to translations from foreign publications, the stock of these is almost unlimited, as the Second Section of the General Staff very kindly furnishes us with copies of all translations, on cavalry subjects, made for them, and in addition many others are made at the Army Service Schools which are available for our use.

However, as stated above, we will need the active co-operation of our members to make this change a success, and it is hoped that they will not only supply us with original articles on cavalry topics, but also to give us, in any form, material for "Military Notes," which many of our members consider the most interesting and valuable feature of the Journal.

EDITOR.







The

Cavalry

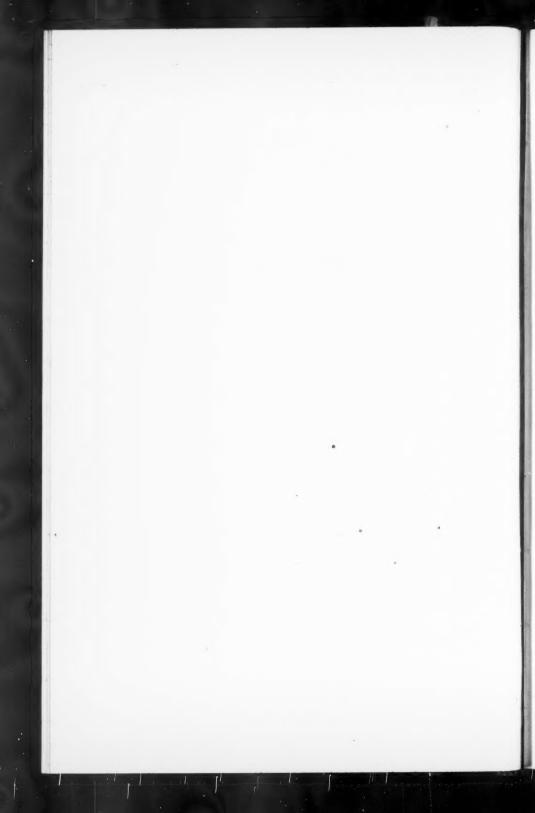
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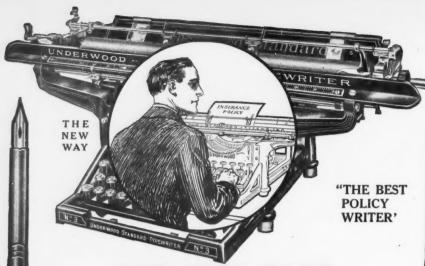
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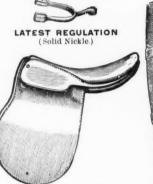
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